Accurate Costs Spark Traffic Growth...p. 48

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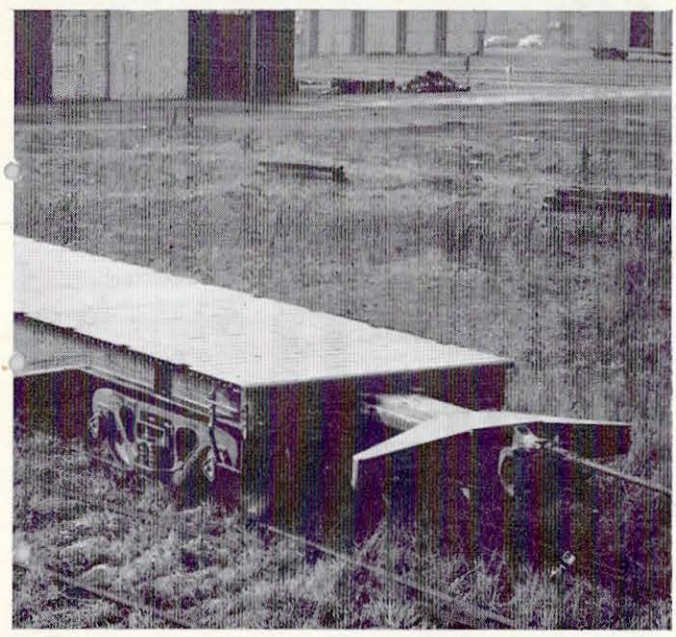
July 13, 1959

RAILWAY AGE *weekly*



P-S Tests New Long Travel Gear

Hydraulic cushion unit promises to cut damage

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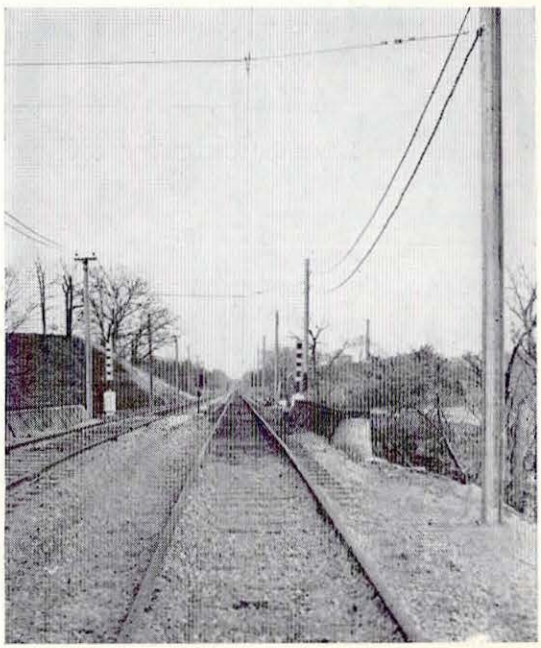
BEAVER FALLS PA

Boston Sets New Transit Pattern

MTA integrates B&A line in major expansion move



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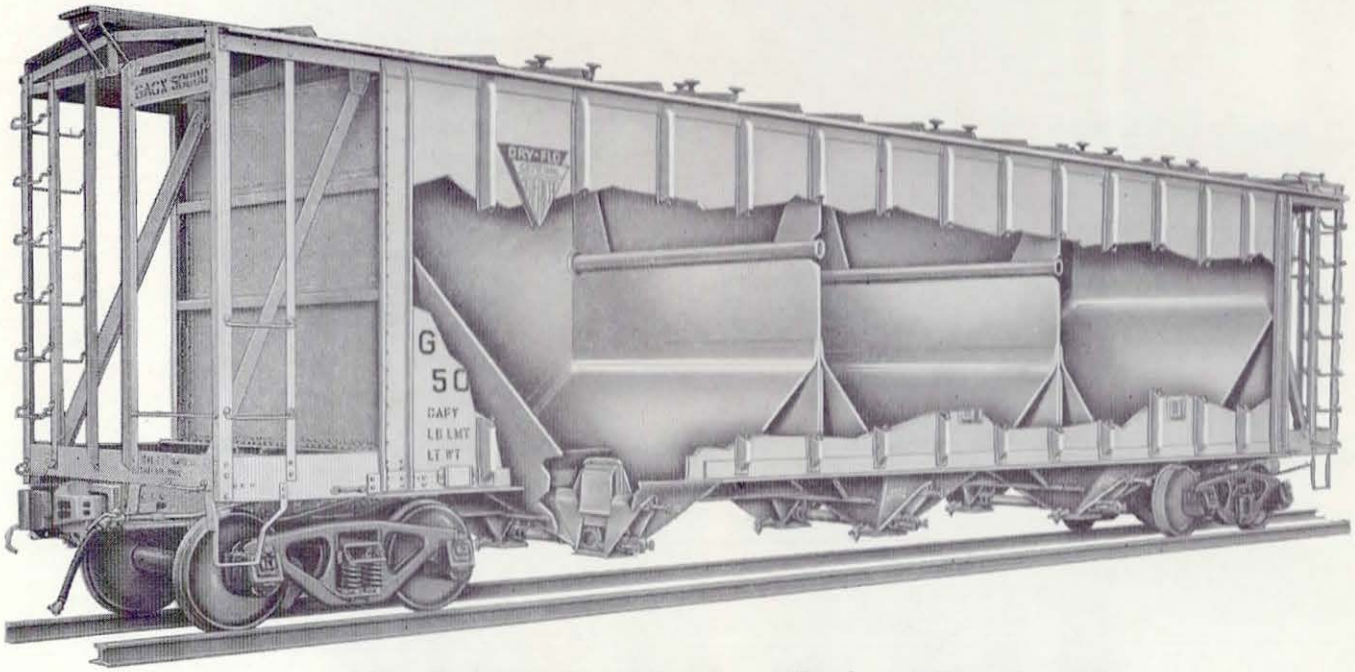

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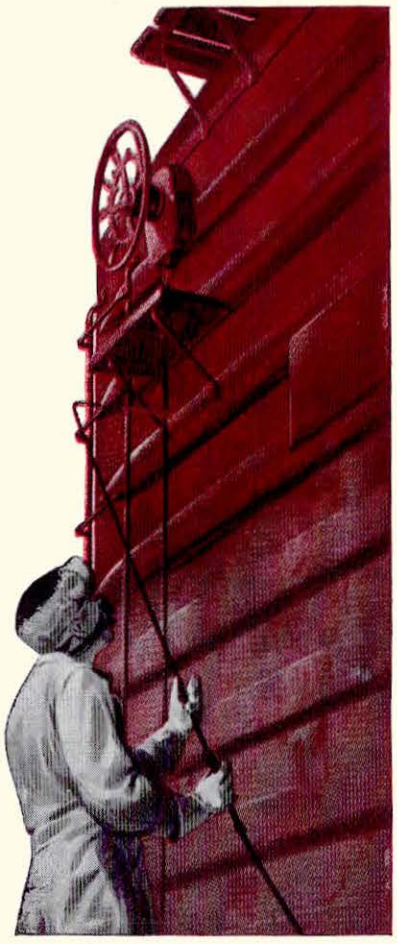

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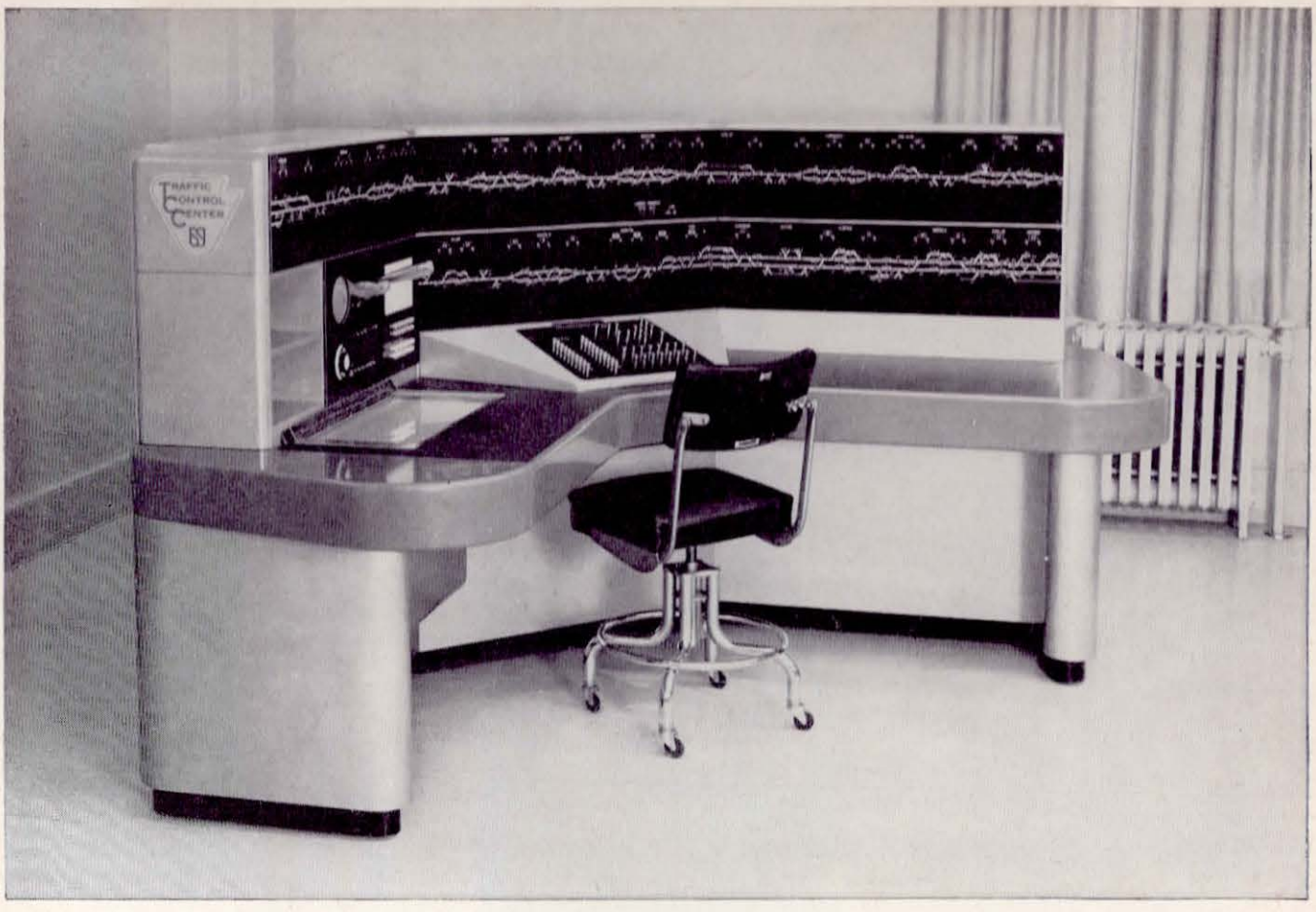

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RAILWAY AGE *weekly* July 13, 1959 • Vol. 147, No. 2

Week at a Glance

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Southern buys aluminum cars ..... p. 9

Southern gets the credit—though perhaps by only a few days—for being the first railroad to make extensive use of aluminum in freight cars. It's spending over $25,000,000 for 1,205 new gondolas and covered hoppers to be built by Pullman and Magor, using 9,000 tons of aluminum from Reynolds. Cars will have roller bearings; payloads of 100 tons; are designed to give better service on bulk commodities.

Working rules . . . an Editorial p.13

Much remedial action is needed to get railroads back on the track to prosperity and healthy growth. Working rules stand at the top of the priority list. Presentation of the essential facts about such rules is an indispensable first step.

Cover Story—Boston sets new transit pattern p.18

The area's Metropolitan Transit Authority just completed a major expansion. It has taken over, and refurbished, a former branch of the New York Central's Boston & Albany. Reports from Boston indicate that riders are flocking back to the rails since the integration move.

Cover Story—P-S tests new long-travel gear p.22

Here's a brand-new weapon in the fight to reduce damage to lading. The device is a refinement of the P-S cushion underframe design.

Philadelphia likes commuter-aid plan p.29

The city's "Operation Northwest"—an experiment in cutting fares and increasing service to attract riders—is working well, at least from the city's standpoint.

Pushbutton CTC broadens dispatcher's control p.32

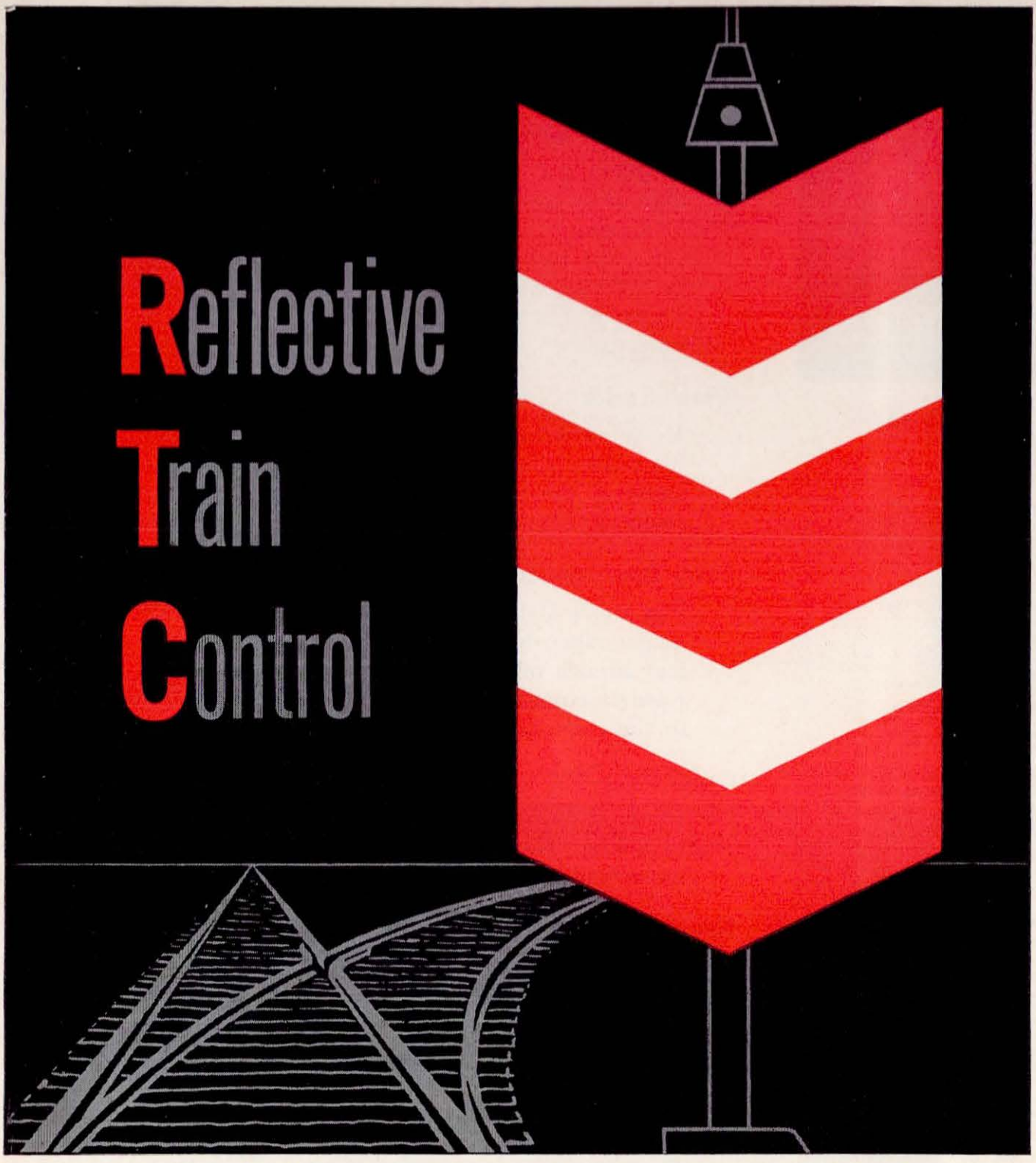
All the pushbuttons are on a central panel within easy reach of the dispatcher. A miniaturized track diagram and all controls are concentrated into the pushbuttons.

Highway tankers ride the rails p.42

A new Bangor & Aroostook tariff covering piggyback movement of gasoline-carrying tank semi-trailers went into effect July 1. Four Maine oil distributors were the first shippers.

The Action Page p.48

Accurate cost figures are of vital importance to railroads. With them, important traffic now subject to competitive erosion can be restored to safety.



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Week at a Glance CONT.

Current Statistics

Operating revenue	
4 mos., 1959	$3,246,567,038
4 mos., 1958	2,984,176,169
Operating expenses	
4 mos., 1959	2,561,979,109
4 mos., 1958	2,484,072,291
Taxes	
4 mos., 1959	342,591,970
4 mos., 1958	279,958,086
Net railway operating income	
4 mos., 1959	237,231,017
4 mos., 1958	122,162,247
Net income, estimated	
4 mos., 1959	161,500,000
4 mos., 1958	48,000,000
Average price railroad stocks	
July 7, 1959	115.53
July 8, 1958	79.93
Carloadings revenue freight	
Twenty-six wks., '59	16,153,512
Twenty-six wks., '58	14,304,116
Freight cars on order	
June 1, 1959	36,869
June 1, 1958	30,386
Freight cars delivered	
5 mos., 1959	14,322
5 mos., 1958	27,138

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Short and Significant

Net income gain of $172 million. . .

is estimated for Class I railroads for this year's first five months. The estimated net is $247 million compared with $75 million for the first five months of 1958. The AAR statement also shows May's estimated net income up $44 million—to $71 million from May 1958's $27 million. This year's net railway operating incomes for May and the first five months were $87,465,588 and $324,696,605, respectively. These compared in turn with 1958 figures of $44,011,500 and $166,173,746. Rate of return for the 12 months ended with May was 3.34%.

Military piggyback . . .

may be the answer to some of the Army's logistic problems, an Army Transportation Corps report indicates. The ATC study finds many advantages for piggyback over road haul for distances over 200 miles. It concludes that piggyback is based on sound economics for movements both within the continental U.S. and abroad, but not for military trans-oceanic movement (fishyback).

Piggybacking of pick-up trucks . . .

has been inaugurated by the Canadian National between Moncton, N. B., and Halifax, N. S., on an overnight basis. The operation differs from conventional piggybacking in that small trucks loaded in one city with freight for delivery in the other are transported intact without transfer of lading. Two trucks are transported on a standard flat car.

Reorganization of Railway Express . . .

will be discussed at a meeting of REA officers and representatives of the Agency's 178 contract roads in Chicago July 15. The plan, involving sweeping changes in express operations, was unanimously approved by REA's board of directors (RA, July 6, p. 41). The New York Central, which helped precipitate the current REA crisis with its announcement last December that it planned to withdraw from the Agency, says it is "studying" the plan.

A big midwestern railroad . . .

will soon be ready to begin piggybacking new automobiles. Rates are now being drawn up. Frisco and Southern Pacific already are in the business (RA, July 6, p. 7).

Negotiations with the M/W brotherhoods . . .

have reached the mediation stage. The National Mediation Board last week scheduled meetings with the parties to begin in Chicago July 15. At issue: job stabilization.

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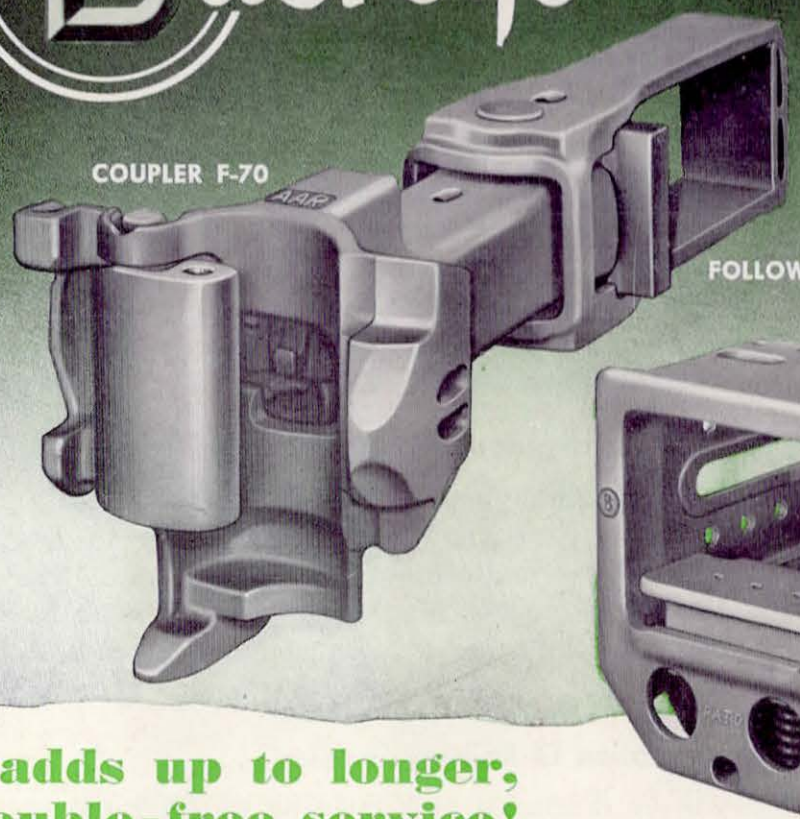

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Southern Buys Aluminum Cars

► **The Story at a Glance: The Southern has ordered from Pullman and Magor 1,205 100-ton-capacity, roller-bearing gondola and covered hopper cars with bodies of Reynolds aluminum on steel undercarriages.**

The order has been hailed as "a pioneering step in introducing the many economies and advantages of aluminum to railroad transportation," and as "a breakthrough in use of light-weight corrosion-resistant materials" for freight cars.

But the Southern may have won its pioneering "first" by only a few days, if reports of pending orders for aluminum refrigerator cars by other railroads prove to be correct.

At a total cost of $25,309,000, the Southern has ordered 1,240 roller-bearing gondola and covered hopper cars—all with carrying capacities of approximately 100 tons, and 1,205 of them with aluminum bodies on steel undercarriages.

Reynolds Metals Company will furnish 18,700,000 lbs of aluminum for the new cars—13,800,000 lbs of plate, 4,400,000 lbs of extrusions, and 500,000 lbs of miscellaneous items. The cars themselves will be built as follows:

- By Pullman-Standard division of Pullman, Inc. (formerly Pullman-Standard Car Manufacturing Co.), at Bessemer, Ala., at a cost of about $15,000,000 — 750 composite aluminum-steel gondolas. These cars will have inside width of 11 ft, inside height of 11 ft, inside length of 50 ft, and payload capacity of 103 tons of coal. With top trusses, flat bottoms, and no hopper openings, they will be assigned exclusively to on-line movement of coal to power generating plants using rotary unloaders. In the aggregate, they are expected to haul a total of around 6,000,000 tons of coal a year. Deliveries are scheduled to begin in October and to be completed by mid-December.

- By Magor Car Corporation, Clifton, N.J., at a cost of approximately $10,309,000 — 455 composite aluminum-steel covered hoppers for alumina, cement, petroleum coke, grains, feeds, coating clays and similar bulk commodities; also 35 covered hoppers of alloy steel construction for bulk lime. All the covered hopper cars will have load capacities of about 100 tons, but because of weight differences in the commodities to be carried they will be of three different sizes—200 of 2,600 cu ft for cement; 215 of 3,818 cu ft for alumina, lime, etc.; and 75 of 4,605 cu ft for coating clays, feeds and grains. The lime cars are to be all-steel to avoid effects of chemical reaction between lime and aluminum. Delivery of the Magor cars is scheduled to begin Sept. 1, and to be continued to completion at a rate of 40 cars per week.

In announcing the order Harry A. DeButts, Southern president, said he expects it to "constitute a worthwhile breakthrough in use of light-weight corrosion-resistant materials in car construction." David P. Reynolds, executive vice president of Reynolds Metals, termed it "a major breakthrough, opening a vast new market for the most versatile of metals" in railroad service.

Worth the Extra Cost

Because of their size, and extensive use of aluminum, the new cars will cost more than conventional cars of the same type, but Southern economic studies indicate that this added initial cost will be more than offset by the higher return produced by greater carrying capacity and lower tare weight. How the new cars will compare with standard cars in gross weight, payload and tare weight is shown in the accompanying table. Three of the new coal cars, for example, costing $60,000, will carry 13 more tons of revenue freight, with 43½ less gross tons in a train, than four conventional 70-ton steel hoppers costing $50,000.

Thus, the Southern expects to realize a major return on its extra investment. On the gondolas, this added cost comes to about $7,500 per car—$20,000 each for the new cars against $12,500 for a regular 70-ton hopper. Return on this increased cost is expected to run from 32% per year "in the most unfavorable situation" to 60%, a Southern spokesman told a Railway Age editor the week before the order was publicly announced.

Results of the cars' use will, in any event, be watched with interest, since the order represents the first large-scale application of aluminum to railroad freight cars in North America. Some roads—such as the Roberval & Saguenay and Canadian National in Canada, and the Baltimore & Ohio and Rock Island in this country—have built a few aluminum cars, principally for demonstration or experimental purposes.

The CNR, in fact, has just completed expedited tests on five aluminum refrigerator cars built last year to designs developed jointly by it, National Steel Car Company and Aluminum Company of Canada, and is reportedly on the verge of ordering possibly several hundred more such cars. The same road

(Continued on page 13)

More Payload — Less Deadweight

103-TON ALUMINUM-STEEL GONDOLA—Cost, $20,000 each

	One Car	Three Cars	Nine Cars
Load (tons)	103	309	927
Tare (tons)	22½	67½	202½
Gross (tons)	125½	376½	1,129½

70-TON STEEL HOPPER—Cost, $12,500 each

	One Car	Four Cars	Twelve Cars
Load (tons)	74	296	888
Tare (tons)	31	124	372
Gross (tons)	105	420	1,260

Transport Consultants Named

The transportation study of the Department of Commerce will be progressed in four phases under contracts just negotiated by the department.

The study is that announced by President Eisenhower in his budget message of last January. It has been under way for some time under the guidance of Dr. Ernest Williams, professor of transportation at Columbia University, who has been with the department as a consultant since February. Those receiving the contracts announced last week and phases to be studied by them are:

R. L. Banks and Associates, transportation consultants of Washington, D.C., cost structures and cost finding procedures used by various modes of transportation for rate making and other management purposes.

J. Harold Deveau, consultant in management problems of Sumner, Md., some aspects of the merchant marine relating historical developments to government policies.

Dr. James C. Nelson, professor of economics at Washington State College, entry controls in domestic transport, requirements with respect to obtaining franchises from the government to do transport business.

United Research, Inc., of Cambridge, Mass., economic regulation under the Federal Aviation Act.

The overall study deals generally with the impact of government policy on the transportation industry in the field of regulation, promotion, procurement, taxation and labor-management relations. Working within these areas already are Dr. Merrill Roberts, University of Pittsburgh; Dr. William Gomberg, University of Pennsylvania; Dr. John Clayton, George Washington University; and Dr. Virgil Cover, Syracuse University.

John J. Allen, undersecretary of commerce for transportation, said reports under the four contracts announced last week are due not later than October 1. He also said the department's own staff would be developing information in related areas, and that arrangements for other phases of the study were still to be made.

Atlantic & Danville Seeks Loan Guaranty

The Atlantic & Danville has applied to the ICC for government guaranty of an $800,000 loan under provisions of the 1958 Transportation Act. The money would be used as follows: reimbursement of applicant's treasury for capital expenditures made since Jan. 1, 1957, $300,000; payment of balance due on 200 second-hand freight cars, $340,000; and for maintenance work, $160,000.

Watching Washington *with Walter Taft*

• **THREAT** of penalty per diem legislation unless its incentive bill is enacted comes from the Senate Committee on Interstate and Foreign Commerce. The committee's favorable report on the incentive bill says that, if Congress fails to act on that measure, "it may be necessary to consider punitive legislation."

THE REPORTED BILL is S. 1789. Sponsored by 19 senators from western and midwestern states, it is also favored by a group of 14 railroads which have been advocating a higher rental charge than the present $2.75 per day. It would give the ICC alternatives for setting the per diem rate, allowing the rate to be made on car-ownership costs or value in use.

THE "PUNITIVE LEGISLATION" is proposed in S. 1812, favored by the ICC and still pending before the Senate committee. This would give the Commission power to establish penalty per diem rates to punish roads deficient in car ownership and to expedite car movements.

FIGURES in the record of its hearings are interpreted by the committee as indicating that two principal opponents of per diem legislation, the New Haven and B&M, are more successful in loading their box cars for off-line movement, and thus earning per diem, than most of the other roads. This showing leaves the committee "not impressed by arguments to the contrary which underly much of the opposition to this legislation."

ON THE HOUSE SIDE, similar per diem bills reached the hearing stage last week. The hearing was held by the Transportation and Aeronautics subcommittee of the Committee on Interstate and Foreign Commerce, and presentations were expected to be pretty much like those made at the Senate hearing last month (RA, June 15, p. 20).

• **DRINKERS** traveling by air won't be permitted to bring their own liquor if the Federal Aviation Agency makes rules it is now proposing. The proposed regulations would prohibit the drinking of any alcoholic beverage aboard air-carrier aircraft unless the beverage is served by the air carrier. A passenger violating the rules would be subject to a "civil penalty not to exceed $1,000."

AIR CARRIERS would be subject to like penalties if they served liquor to passengers who appear to be intoxicated. The proposed rules will not be promulgated until after FAA has considered views of interested parties. These may be submitted within 60 days from July 3.

FAA ACTED on the basis of evidence in records of congressional hearings on bills to prohibit airlines from serving liquor to passengers. The evidence indicated that most instances of intoxication and disorderliness have been caused by passengers' consumption of personal liquor supplies rather than by consumption of liquor served by the air carrier.

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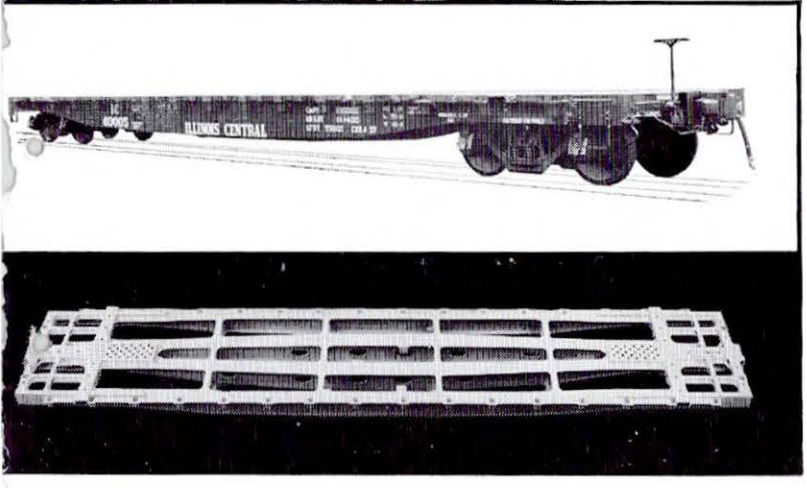

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WORKING RULES . . . AN EDITORIAL

How does a fellow with a serious ailment go about getting cured—if neither the doctor nor anybody else is supposed even to mention what his trouble is?

In last week's Railway Age we published a statement by Guy L. Brown, head of the BLE, in which he was highly critical of a recent speech by AAR President Daniel P. Loomis. Actually, Mr. Loomis had done no more than state the facts about the working rules situation — unequivocally but temperately.

Other railroad officers have made similar speeches. We ourselves went thoroughly into this working rules situation in a comprehensive article ("The Trap," RA, Mar. 24, 1958). In none of this exposition that we have seen, including the recent newspaper advertisement by the AAR, have we detected the slightest evidence of a "smear campaign" against railroad employees, which Chief Brown descries.

If a fellow has got acute appendicitis, it is the doctor's obligation to tell him so and insist as emphatically as he can on an operation. There is no better qualified "doctor" anywhere on railway labor relations than Mr. Loomis. He has been doing his duty of diagnosis conscientiously — and without in any way reflecting adversely on the patient's character.

These business-killing working rules have just got to be modified. Intelligent employees and union officers know this just as well as managements know it. But it is management's duty, not just to believe these rules are wrong, but to take effective steps to modify them. The indispensable step is to present the essential facts. Instead of criticizing Mr. Loomis and his collaborators for what they're doing, everybody on the railroads ought to thank them for tackling a difficult job so resolutely and temperately.

There is much remedial action needed to get the railroads back on the track to prosperity and healthy growth. Working rules stand at the very top of the priority list—they are the one big item on the list that the railroads and their unions could take care of themselves, without any change in laws or regulation.

ALUMINUM CARS *(Continued from page 9)*

also is said to be interested in aluminum covered hopper cars, because of Alcan's experience with such cars in Jamaica and design work it has done for similar cars in other countries.

Other U. S. railroads have applied aluminum components, such as doors, roofs and liners, to conventional box and refrigerator cars.

But no North American railroad, up to now, has specified the light-weight metal so extensively, in so many cars, as the Southern.

The cars themselves, in addition to pioneering in the use of aluminum, will have the largest individual load capacities of any cars in present or immediately prospective use—with a very few exceptions. Principal exception—aside from some heavy-duty flats—is what's left of the 2,025 120-ton gondolas once owned by the Virginian and 2,100 100-ton cars operated by the Norfolk & Western.

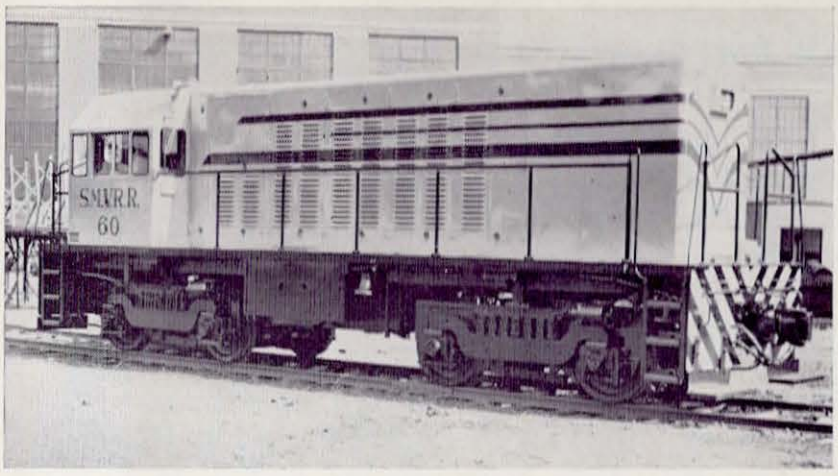
Limited Demand

History of the former was outlined for Railway Age by D. C. King, Virginian vice president and general manager.

In the early twenties, he said, the Virginian had 2,025 gondolas of 120-ton capacity, later reduced to 105-ton capacity; 205 of these cars are now owned. The number was reduced because of limited demand by shippers due to the fact that "some trans-shipment coal piers would not accept them on dumpers and other shippers preferred hoppers for ease in unloading especially with car shakers."

The N&W's 2,100 100-ton gondolas were built between 1914 and 1921. Their use was discontinued when demand for them dropped.

The Southern, however, is not likely to encounter the unloading problem, because of the captive service for which its new gondolas are intended. Its position will be roughly comparable to that of the Quebec North Shore & Labrador, which is successfully using and rotary dumping roller-bearing 98-ton ore cars.



GE Universal: First in the West

Santa Maria Valley, 36-mile California short line, has received the first General Electric universal diesel locomotive to go into service in the western U.S. This 700-hp U6B unit, powered with a Caterpillar D-397 engine, will supplement three 70-ton GE units delivered in 1948 and 1950. More than 450 U6B units have been delivered for service in the U.S., Central and South America, South Africa, and Turkey.

JCL Cuts Bridge Painting Costs

Jersey Central says it's cut costs up to 75% by using a spraying machine to coat steel bridges with an asphaltic oil.

JCL will apply its cost-cutting method to the "face-lifting" of 311 bridges along its 612 miles of road, according to Chief Engineer Bernard J. Minetti.

Recently, says Mr. Minetti, the road applied asphaltic oil to a 100-ft bridge in Elizabeth, N. J., at a total cost in labor and material of less than $1,000. The job took 10 days. The former method—involving the application of two coats of graphite paint—would have taken 24 days and cost more than $4,000, Mr. Minetti estimates.

Key to the sharp cut in costs, says the chief engineer, is the spraying machine. JCL has purchased two Patton Bridge and Building Spraying Machines at a cost of $12,000 apiece. The road says it has already saved the entire cost of one machine in the course of painting four bridges in Elizabeth, two completely and two partially.

According to Mr. Minetti, four main factors contribute to the cost reduction: lower material cost (about 21 cents a gallon for asphaltic oil compared with about $2.85 a gallon for paint); less manpower (four-man crews vs. eight); one-coat application vs. two; elimination of scaffolding; less time and effort spent in preparation of surface areas.

The new machines heat the oil to about 100 degrees fahrenheit, then "atomize" it as it is applied. Completely portable, they can run either on rails (up to 25 mph in either direction) or on roads and highways where they are pulled on trailers. They are equipped with extension arms which swing a working platform over the sides of the bridges.

Increased Shop Forces Urged by Labor Leader

A labor spokesman has called on the railroads to build up their shop forces "in order to reduce the present serious bad order situation as promptly as possible."

Michael Fox, president of the Railway Employes' Department, AFL-CIO, and vice chairman of the Railway Labor Executives' Association, says the railroads should also "utilize their shop facilities to integrate car building with the maintenance and repair of equipment."

"To accomplish this," Mr. Fox said in a statement filed with the Senate Interstate Commerce Committee on behalf of the RLEA, "they should stabilize employment by budgeting their shop work on an annual, rather than a monthly, basis. With a little planning of this kind, the freight car shortage could be met at a minimum cost to the carriers and could result in the railroads' recapturing much traffic now being lost because of their present lack of sufficient serviceable equipment."

Mr. Fox submitted tables which he said showed "the direct relationship between the rise in bad order freight cars and the severe cutback in the number of railroad equipment maintenance workers" during the last two-and-one-half years.

He said railroad management had committed "a colossal blunder in failing to utilize the available skilled manpower and facilities to keep their equipment in serviceable condition." As a result, said Mr. Fox, the railroads now face "one of the most critical freight car shortages in history."

ICC Simplifies Tariffs On Long-and-Short-Haul Clause

The ICC's Fourth Section Order No. 19144 is a tariff simplifier. It permits railroads to publish commodity rates for which they have relief from the long-and-short-haul clause without showing in the tariffs the basis for constructing rates that the relief orders require at higher-rated intermediate points. The simplifier applies to all outstanding long-and-short-haul clause orders covering commodity rates between all points in the country, except commodity rates related to the class-rate scale prescribed by the Commission in the 28300 case.

The simplifier provides that in lieu of setting out the basis for constructing the intermediate-point rates, the tariffs may include a provision stating in effect that upon request of an interested shipper or receiver, the railroads will furnish complete and detailed information regarding the basis for constructing the rates.

Letters from Readers

'Fairness' Appreciated

Cleveland, Ohio

To the Editor:

I have seen the treatment you gave my letter in your July 6 issue ['Bad 'Faith' in Rules Fight?, p. 9] and I want you to know that I appreciate your fairness in the handling of it.

Guy L. Brown
Grand Chief Engineer, BLE

'Teriffic' Article

St. Louis, Mo.

To the Editor:

I would appreciate it very much if you would send a copy of the June 29 Railway Age to each of the [54] branch plant traffic managers listed on the attached sheet.

I want to thank you for the terrific job you did with our article ["RP Needs Whistle Stop Service," p. 30].

T. R. Atchison
Director of Transportation
Ralston Purina Co.

SP now has 500 diesels equipped with STAN-PAC radio

POSITIVE SURGE PROTECTION

transistors make the difference

500 now in and operating . . . and more new Motorola 64-volt STAN-PAC radiophones are on order to upgrade reliability all along the line!

Records show these STAN-PAC units are really slashing S.P.'s radio maintenance costs. Vibrators, converters and expensive rotary machinery are *out*. Fully tested and approved transistorized power supplies, voltage regulators and audio circuits are *in*. Result: a level of 2-way radio *reliability* unequaled by any railroad radio (including previous Motorola models)! Southern Pacific is enjoying another big plus on the savings side from Motorola's new electronic power regulation that maintains a constant DC input to power supply. It rides out the most severe electrical induction surge any diesel can deliver. Improved voltage regulation means tubes last longer!

It's no wonder that new STAN-PAC sets rarely see the repair shop . . . and no wonder leading railroads are *proving* that Motorola STAN-PAC is *the* diesel radio.

All the facts are as close as your nearest Motorola Railroad Communications Representative. Call him today—or write for full details.

MOTOROLA RAILROAD RADIO

Motorola Communications & Electronics, Inc., 4501 Augusta Blvd., Chicago 51, Illinois
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YOCAR

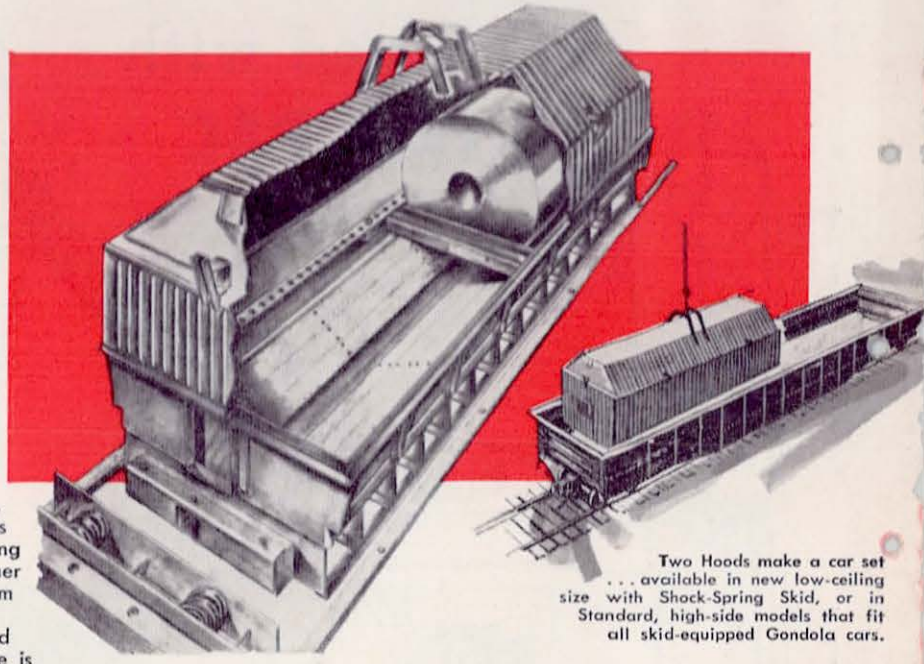
BRINGS RAILROADS AND SHIPPERS

... that lower shipping costs,

1

NEW Gondola Hoods with *Shock-Spring* Coil Skid

New, short-wall Yocar Hoods give greater protection . . . fit tighter, handle easier, even in low height-clearances. Balanced Lift Bracket makes lifting easy . . . storing convenient. NEW Shock-Spring COIL SKID has deeper coil-well for positive cradling . . . new-type cross-member Retainer Bar locks coils securely for maximum damage protection . . . Skid and Retainer Bar surfaces are Oak-lined for extra safety. Skid under-frame is all-welded steel construction with built-in inspection hatch; rugged shock-spring bracing at car ends cushions roughest "humping."

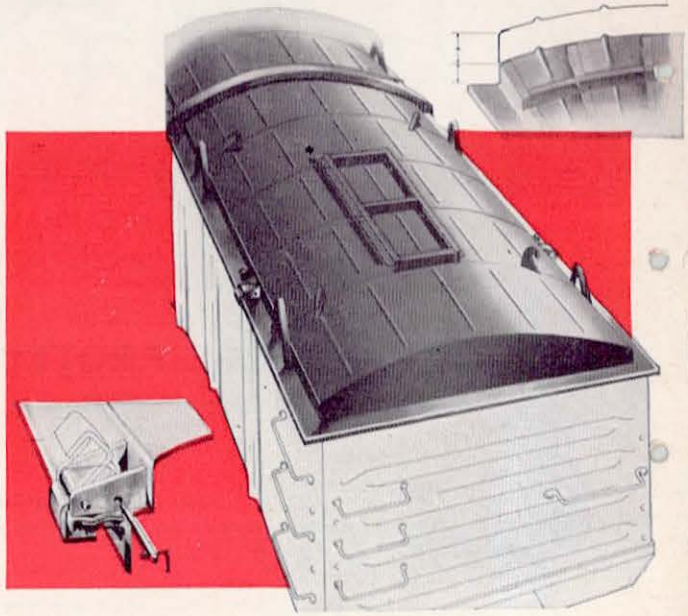


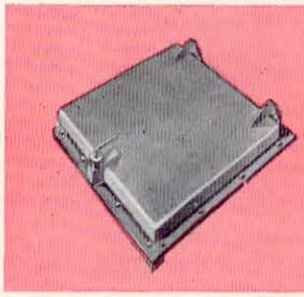
Two Hoods make a car set . . . available in new low-ceiling size with Shock-Spring Skid, or in Standard, high-side models that fit all skid-equipped Gondola cars.

2

NEW Gondola Roofs

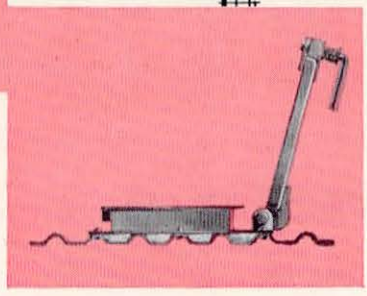
Economical, these rigid, all-steel curved-top GONDOLA ROOFS are beaded for extra durability. Roof height is varied to meet A.I.S.I. 48-inch standards. Overlapping lip in center section fits to two adjoining end sections; better weather protection for steel bars, sheets, plates, tubing; rugged swing-out lock prevents catching, lowers maintenance cost; stack-easy brackets permit easier storing. Manway doors, catwalk, special height angles optional.





Door in locked position; fits roofs, hoods, containers regardless of types of surface.

3



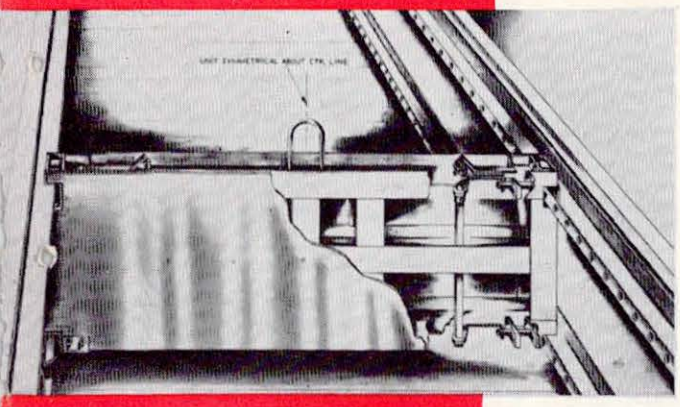
Door open shows seal application on beaded car surface.

NEW Manway Doors

Yocar's new low-cost inspection doors solve covered Gondola inspection problems . . . fit all types of car surfaces, apply to vertical or horizontal areas . . . minimize bad-order cars. Special foam rubber and rubber sealing gasket are completely weather-tight . . . spring-loaded locking handle is built to "take it."

FIVE NEW DAMAGE CONTROL DEVICES

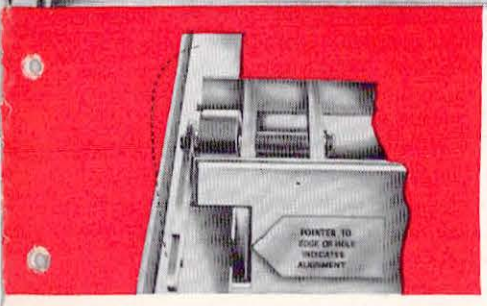
cut damaged shipments, save man-hours



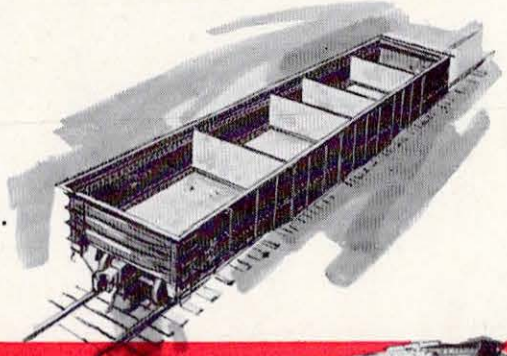
4

NEW RoLLoK Movable Bulkheads

. . . cut installation time in half with new "Zee"-section tracks at top and bottom of car walls; bulkhead positions easily on case hardened rollers; over-sized locking pins allow for car wall distortion . . . swivel crank operates locking pins quickly and safely. Meets A.I.S.I. standards . . . steel or wood facings available . . . bulkheads are in car sets to meet any requirement.



Eccentric rollers permit bulkhead to rest weight on applied "Zee" track . . . protecting against flat surfaces and bearing wear . . . this feature optional.



5

ECONO-GUARD

...low-cost steel anchor-wall liners

ECONO-GUARD adds years to car wall life . . . saves lift truck damage . . . gives extra car strength, keeping cars in service longer . . . provides greater damage protection to shipments with over 200 "Safe-Cargo" anchoring pins. Ask about SAFE-CARGO anchor belt rails for PIGGY-BACK trailers.

Visit us at the A.R.S.A. Convention, Booth 170, Sept. 20-23, Hotel Sherman, Chicago

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Dept. DPF #1
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Please send your new Damage-Control booklet, "Clear Track to Clear Profits." We are interested in applications of these new devices.

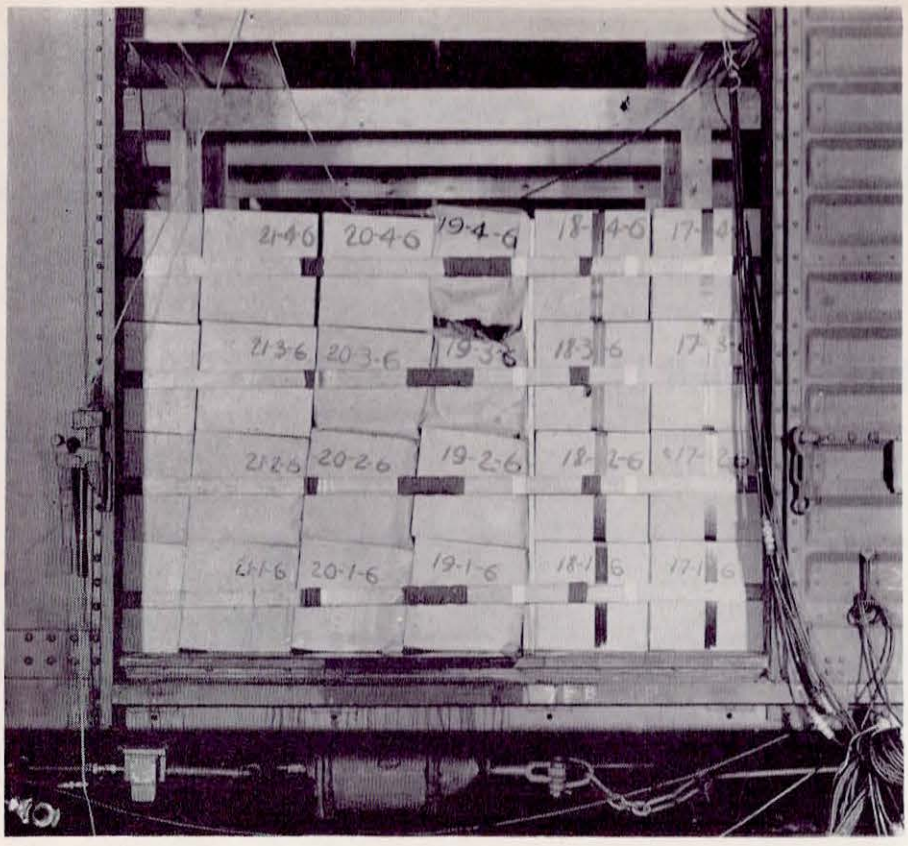
Your name: _____

Title: _____

Company name: _____

Address: _____

City: _____ Zone: _____ State: _____



LADING DAMAGE in the door area occurred when this car was impacted at 6 mph by Pullman-Standard researchers. Car was equipped with a 10-in. travel cushion underframe. More severe impact tests on a car equipped with the new P-S device produced no damage to a similar load.

New P-S Long-Travel Gear Cuts Lading Damage

A 50-ton hopper car, loaded with 164,000 lb of sand, came rolling off the incline at 13½ mph. With a shattering crash it slammed into a standing capacity-loaded flat car.

Railroad men watching this demonstration looked—then looked again. The lading on the flat car hadn't moved. An old coffee can, half filled with water, had been placed on the car floor before the impact. The can was still there—and the water was still in the can.

It was a dramatic introduction to Pullman-Standard's new long-travel hydraulic cushion underframe.

The showing made by the experimental gear came as no surprise to P-S engineers. Among the tests they'd already made: a 13-mph impact against a car loaded with 880 cases of bottles. The results: only 17 bottles cracked.

Actually, this new device is a refinement of the P-S cushion underframe design introduced seven years ago. Plant and field tests have made Pullman confident that the long-travel gear "will substantially reduce the more than $100,000,000 annual bill paid by the railroads for damage to lading."

The new underframe provides 30 in. of travel at either end of the car to dissipate impact shocks and prevent recoil effects. Present cushioning devices, P-S notes, provide only a maximum of 10 inches travel.

During normal travel or when the car is standing, the new underframe is in neutral position. Run-in and run-out of couplers is the same as on conventional cars.

Under impact, the sliding center sill moves inward against the cushion gear, which is positioned at the center of the car in a pocket inside the center sill. As the sill moves, the cushion gear is squeezed between lugs on the sliding sill and a key attached to the car body. The gear controls impact force between sill and carbody. This relieves the body bolsters from transmitting the coupler forces to the carbody.

The draft gear acts as a cushion between coupler and sliding sill. The cushion gear itself acts as a cushion between sill and carbody.

The new underframe was developed out of extensive tests by Pullman's Research and Development Division. The tests showed that great reductions in coupler force don't necessarily mean corresponding reductions in lading damage.

P-S got excellent results with its 8- and 10-in. travel frames on impact tests involving cars loaded with clay building tile. But with loads of glass bottled goods in cartons, "more bottles were broken in the cushion car than in the standard car (not equipped with cushion gear)."

Resilience was the key to the problem. Compression of the many layers of fibreboard in a car length allowed the load to shift.

Preliminary studies, P-S notes, indicated that present (10-in.) limits of cushion travel probably couldn't give effective load protection, regardless of the reduction in coupler force.

Later tests used a special device which could be adjusted for various travels and coupler forces. Experimentation and mathematical analysis of test results led P-S to conclude that "as cushioning is extended beyond 10 inches, a sudden sharp drop in damage is encountered, which then gradually diminishes. At approximately 30 inches of travel, a point of diminishing returns is reached, so that further reductions in damage are obtained only at the expense of rapidly increasing travel requirements. At travels less than 30 inches, the full potential of cushioning is not realized. Thus, 30 inches of travel appears to be the optimum for this class of lading."

(Pullman-Standard had a three-year study of 3,440 cars as a measure of the value of cushioning. According to reports on condition of lading at destination, goods packed in fibre boxes and other containers accounted for one-third of all damage claim payments—while the actual movements earned only one-fifth of gross freight revenues and involved one out of every nine carloads shipped. Pullman-Standard's comment: "It would be good business to earn one-fifth of the gross revenue with one-ninth of the equipment—if it could be hauled without damage." Elimination of damage to this class of lading alone, P-S noted, "would mean a savings of over $25,000,000 a year to Class I railroads.")

The long-travel design has been applied in two forms—as a cushion rack mounted on a flat car deck (RA, June 22, p. 23), and as an underframe for an 85-ft flat car.

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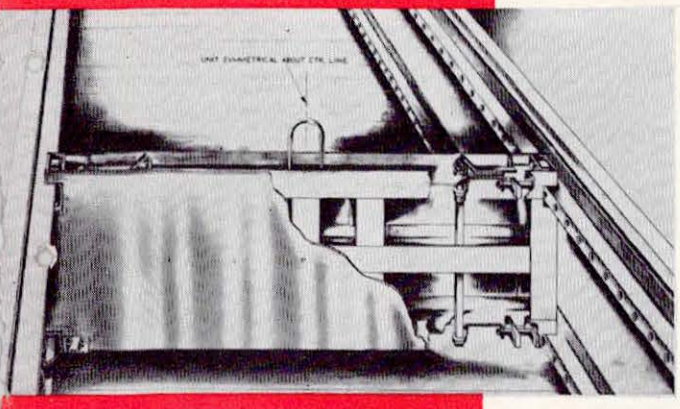
cut damaged shipments, save man-hours



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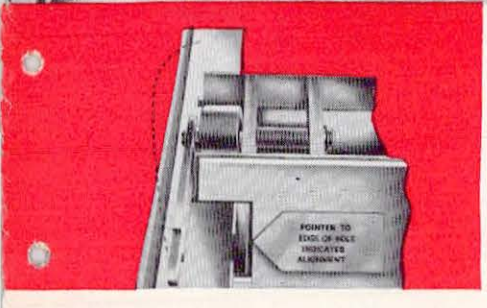

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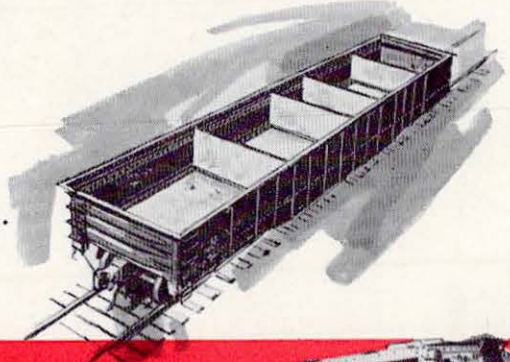

5

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Your name: _____

Title: _____

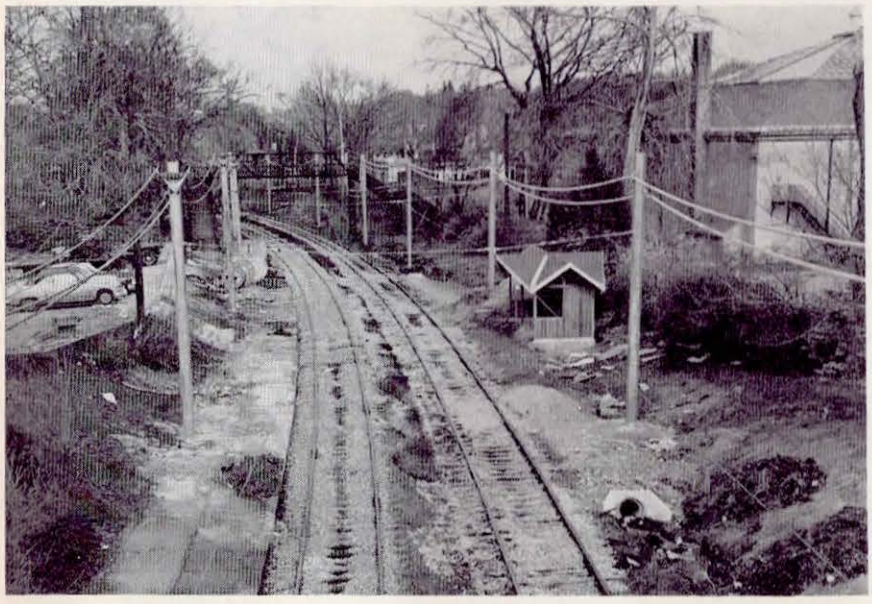
Company name: _____

Address: _____

City: _____ Zone: ____ State: _____

Boston Sets

JUNCTION with the Boston and Albany's former Newton Highlands branch is at the top of a 500-ft incline (foreground, before track was laid), from the subway mouth.



PAGODA-STYLE shelters have replaced the B&A's heavy granite stations. Rehabilitation and complete rebuilding of some portions of track, along with new yards and loops, cost over $1,300,000. Track and station work was under way when photograph was taken.

PARKING AREA for 1,350 automobiles has been established around loop at outer end of rapid transit line. Lawns surrounding former B&A stations have been converted into parking areas wherever it was possible.

As the New Haven's Old Colony commuter service to Boston's southeastern suburbs ended on June 30, a completely new rapid transit service opened through the western suburbs of Brookline and Newton.

The Metropolitan Transit Authority began to operate its transit trains over the 9-mi line which had formerly been the Newton-Highlands branch of the New York Central's Boston & Albany.

Thirteen months had elapsed since B&A train service ended. During that time, the double-tracked commuter line was rebuilt and electrified, equipped with transit style stations and parking lots, and connected with the MTA subway system.

The new setup is all part of a master plan for transportation in Boston and its suburbs. Twelve years ago, the Metropolitan Transit Recess [Coolidge] Commission analyzed Boston's commuting problems and proposed expansion of MTA rail service. The Metropolitan Transit Authority, a political subdivision of the Commonwealth of Massachusetts, covers 14 cities and towns. It operates buses and subway, elevated and surface transit trains in an area of over 100 sq mi, serving 1.5 million people.

Prior to the opening of the former NYC line, MTA rail routes radiated from downtown Boston for approximately 5 mi. The terminal of the new line is over 10 mi from the city center. This is in line with the Coolidge Commission recommendations. The commission's study showed that, to utilize the full capacity of the MTA tunnel network and downtown stations, MTA main lines should be extended 10 to 15 mi, using existing railroad rights-of-way.

The extension to the western suburbs, just opened, received particular emphasis in the report. In July 1957, approval was given by the Massachusetts legislature for MTA to acquire the Boston & Albany line and convert it into a rapid transit operation. With ICC approval, New York Central service ended May 29, 1958, and MTA took over the property—land, tracks, and stations.

Immediately, the Authority entered into a contract with the Perini Corporation calling for the construction and rehabilitation necessary to convert the line for rapid transit.

The rehabilitation consisted primarily of track reconstruction. Operation of lightweight PCC trolley-car trains requires much better track surface than had been maintained for operating conventional railroad equipment. Some

a New Rapid Transit Pattern

11% of the rail in the 9.4-mi double track line has been renewed; almost half the ties were replaced, and 25% of the line was reballasted. The entire line was resurfaced.

The biggest single item in the project was the connection between an existing subway tunnel and the inner end of the B&A branch. It is an 1,150-ft section of double-track right-of-way diverging from the Boylston Street subway about two miles west of the city center and including an incline to the surface level at the junction with the former B&A line.

Stations on the new rapid transit line will be at the same points where the B&A had stations. With the exception of the terminal at end-of-the-line Riverside and at an intermediate station known as Reservoir, the work consisted mainly of regrading and paving sections previously occupied by station buildings, and changing retaining walls and paving lawns to give as much parking space as possible.

At Reservoir station, a loop over the main line permits the turning of trains. There is twice as much service from this point to Boston as there is from Riverside. A new yard with a capacity of 47 cars has been built. At Riverside terminal, there is an 18-car yard, a station with waiting room and concession area, and a parking area for 1,350 automobiles.

It is believed this parking area will prove to be one of the most attractive along the outer limits of metropolitan Boston. It is less than ½ mi from the intersection of the Massachusetts Turnpike and Route 128, a limited access superhighway which circles the metropolitan area. The transit station, car loop, and car yard will be in the center of the parking area to provide the shortest walking distance to the station.

A complete electric distribution system was established for the new line.

About 1,000 structural steel columns were erected to support the trolley system. The automatic block system used by the New York Central has been completely replaced with Union Switch & Signal rapid-transit signaling. Forty automatic block signals and three automatic interlocking plants are involved.

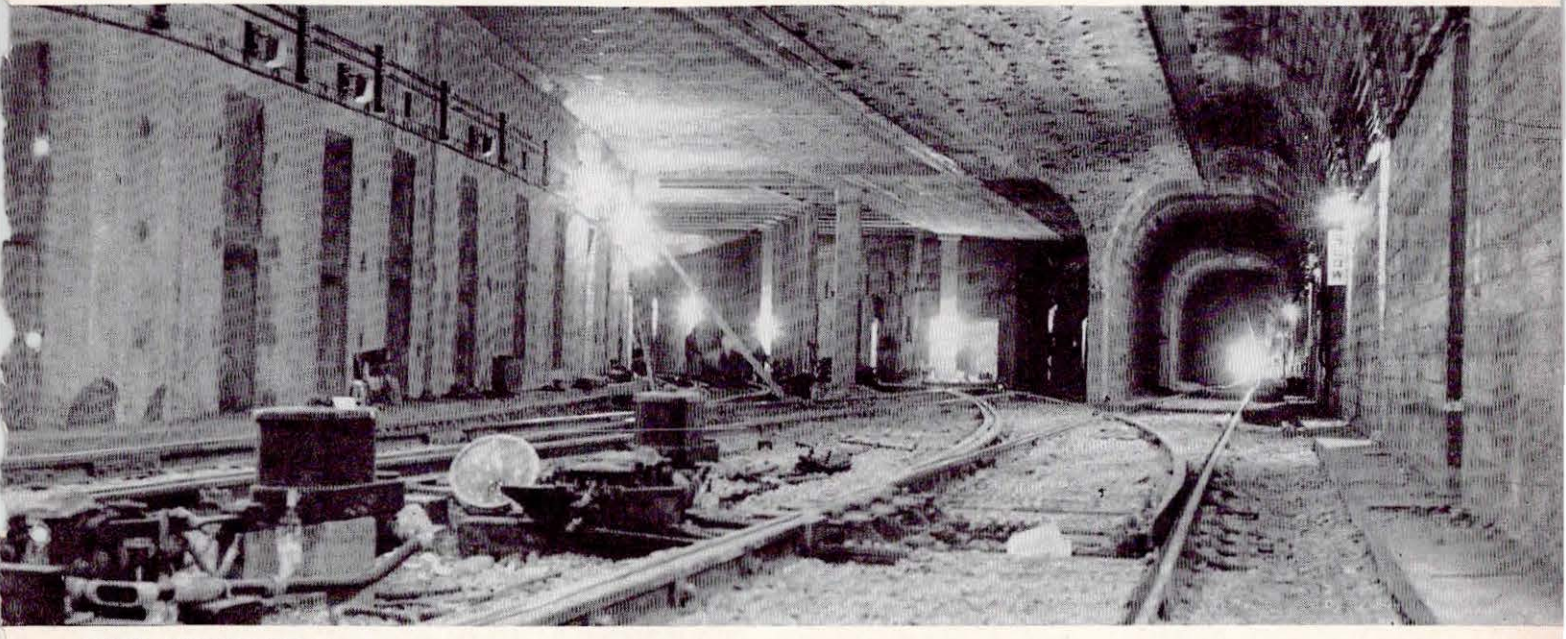
During the last years of railroad service, commuter trains on the Newton-Highlands branch were handling approximately 3,000 passengers daily. It is estimated that MTA trains will handle over ten times this number after the operation is thoroughly established. The character and type of riding will be altered. MTA provides all-day service instead of the railroad's rush-hour-only operation. The 20-cent fare will be considerably lower than railroad rates.

It is expected that MTA service, which carries passengers directly to business, educational and social centers without extra cost and frequently without transfer, will be a big factor in developing additional patronage. The regularity and frequency of service are expected to generate considerable "reverse" riding to the large industrial area which is developing at the intersection of Route 128 and the Massachusetts Turnpike.

There are already some MTA bus and trolley routes into the district served by the new Highland branch. Because this operation is entirely on private right-of-way, it is anticipated that almost half the patronage will be passengers diverted from existing routes, where speed is limited by auto traffic. Because 13 months have elapsed since trains stopped, all traffic generated by the new line will have to be self-generated.

As one group of commuters finds a new rail service available, the 10,000 who were riding the New Haven Old Colony trains are just discovering what no train service means.

The future of the Old Colony lines within 15 miles of the center of Boston which produced two-thirds of the commutation traffic is undetermined. It has been proposed that the lines be electrified and integrated with MTA, making arrangements for continuing diesel-powered freight service by the New Haven. Actually, most of the trackage involved lies outside MTA jurisdiction. This may be solved by establishment of a South Shore Transit Authority which could make contracts to have MTA operate SSTA equipment.



NEW CONNECTION with the existing Boylston Street subway (right), cost nearly $2,000,000 and was the major item in the integration project. Membrane waterproofing was used because the tunnel is below water level.

TWO NEW PRODUCTS JOIN N-S-F®

STRAN-STEEL ANCHOR LINER WITH

NAILABLE STEEL DOORPOSTS take repeated nailing of grain doors without damage, keep car in revenue service. Nailable Steel Doorposts, usable with either plug or sliding doors, also protect vulnerable doorway areas against lift truck damage.

NAILABLE STEEL DOORPOSTS

NOW, NEW AND REBUILT FREIGHT CARS CAN LAST LONGER, SAVE AND SERVE MORE

Since its introduction 12 years ago, N-S-F, the original **NAILABLE STEEL FLOORING,** has been put to work in more than 70,000 freight cars by 62 leading railroads. Now, Stran-Steel Corporation has developed two new companion products to help you get still more miles of Class A service from new and rebuilt rolling stock.

STRAN-STEEL ANCHOR LINER circles the car with a corrugated wall of **GLX-W** high-strength steel that reduces dead weight compared to ordinary carbon steel liners of equal strength. Side heights are variable, with full height on the ends to strengthen these areas substantially and protect against bowing. Integrated with the liner are dozens of recessed strap anchors for fast, safe strapping. Sidewalls and decking account for 70% of rip tracking; shielding these surfaces with Stran-Steel Anchor Liners and N-S-F can make a healthy reduction in maintenance costs.

NAILABLE STEEL DOORPOSTS strengthen this vulnerable section against lift truck damage and stand up for years of service. Repeated nailings of grain doors will not weaken or splinter them.

These two new products—Stran-Steel Anchor Liner with Nailable Steel Doorposts—join **N-S-F** to give new and rebuilt freight cars complete protection, lading flexibility. Such cars carry all types of lading—rough, sacked, finished or bulk—and stay in revenue service longer. Information available from Stran-Steel representatives in Chicago, New York, Philadelphia, St. Louis, Cleveland, San Francisco, Minneapolis and Atlanta. In Canada, **N-S-F** and Stran-Steel Anchor Liner with Nailable Steel Doorposts are sold by International Equipment Co., Ltd., Montreal.

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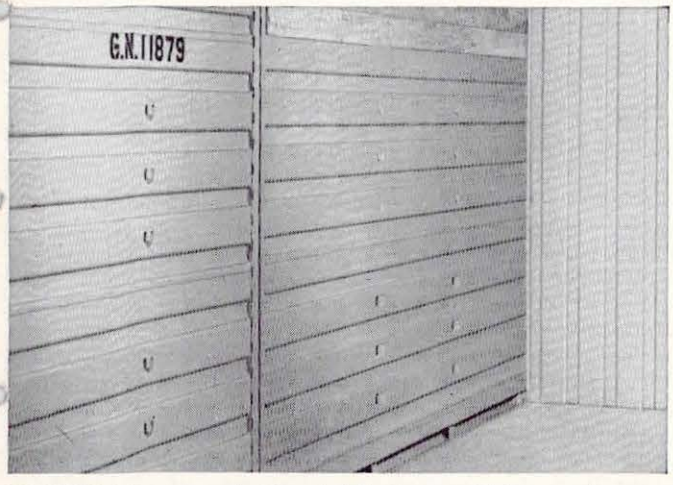
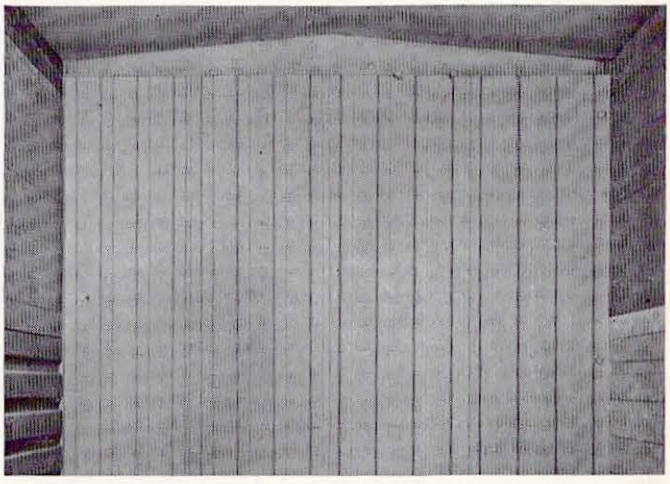
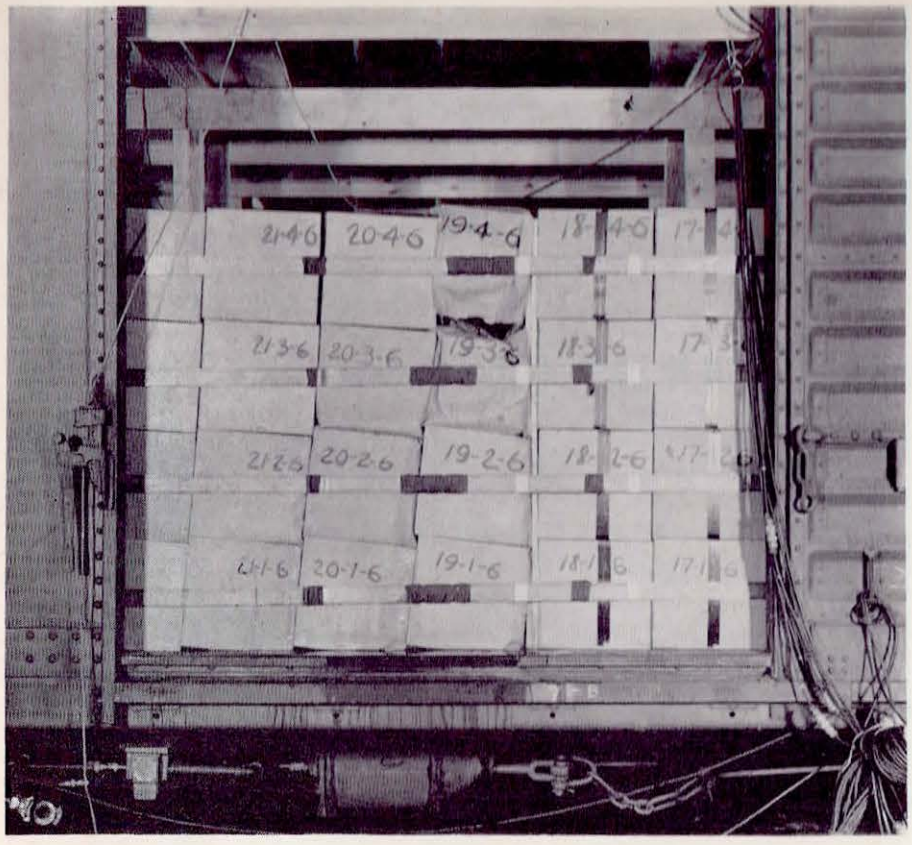


SIDEWALLS, too, are protected against the damage which commonly causes rip tracking. Stran-Steel Anchor Liner, shown here on both wall and plug door, also provides many recessed strap anchors to brace lading quickly, safely.



ENDWALLS, lined to the full height of the car, are substantially strengthened and protected against bowing. Stran-Steel liner is made from new GLX-W steel which, compared to mild carbon steel, gives equal strength with less dead weight.



LADING DAMAGE in the door area occurred when this car was impacted at 6 mph by Pullman-Standard researchers. Car was equipped with a 10-in. travel cushion underframe. More severe impact tests on a car equipped with the new P-S device produced no damage to a similar load.

New P-S Long-Travel Gear Cuts Lading Damage

A 50-ton hopper car, loaded with 164,000 lb of sand, came rolling off the incline at 13½ mph. With a shattering crash it slammed into a standing capacity-loaded flat car.

Railroad men watching this demonstration looked—then looked again. The lading on the flat car hadn't moved. An old coffee can, half filled with water, had been placed on the car floor before the impact. The can was still there—and the water was still in the can.

It was a dramatic introduction to Pullman-Standard's new long-travel hydraulic cushion underframe.

The showing made by the experimental gear came as no surprise to P-S engineers. Among the tests they'd already made: a 13-mph impact against a car loaded with 880 cases of bottles. The results: only 17 bottles cracked.

Actually, this new device is a refinement of the P-S cushion underframe design introduced seven years ago. Plant and field tests have made Pullman confident that the long-travel gear "will substantially reduce the more than $100,000,000 annual bill paid by the railroads for damage to lading."

The new underframe provides 30 in. of travel at either end of the car to dissipate impact shocks and prevent recoil effects. Present cushioning devices, P-S notes, provide only a maximum of 10 inches travel.

During normal travel or when the car is standing, the new underframe is in neutral position. Run-in and run-out of couplers is the same as on conventional cars.

Under impact, the sliding center sill moves inward against the cushion gear, which is positioned at the center of the car in a pocket inside the center sill. As the sill moves, the cushion gear is squeezed between lugs on the sliding sill and a key attached to the car body. The gear controls impact force between sill and carbody. This relieves the body bolsters from transmitting the coupler forces to the carbody.

The draft gear acts as a cushion between coupler and sliding sill. The cushion gear itself acts as a cushion between sill and carbody.

The new underframe was developed out of extensive tests by Pullman's Research and Development Division. The tests showed that great reductions in coupler force don't necessarily mean corresponding reductions in lading damage.

P-S got excellent results with its 8- and 10-in. travel frames on impact tests involving cars loaded with clay building tile. But with loads of glass bottled goods in cartons, "more bottles were broken in the cushion car than in the standard car (not equipped with cushion gear)."

Resilience was the key to the problem. Compression of the many layers of fibreboard in a car length allowed the load to shift.

Preliminary studies, P-S notes, indicated that present (10-in.) limits of cushion travel probably couldn't give effective load protection, regardless of the reduction in coupler force.

Later tests used a special device which could be adjusted for various travels and coupler forces. Experimentation and mathematical analysis of test results led P-S to conclude that "as cushioning is extended beyond 10 inches, a sudden sharp drop in damage is encountered, which then gradually diminishes. At approximately 30 inches of travel, a point of diminishing returns is reached, so that further reductions in damage are obtained only at the expense of rapidly increasing travel requirements. At travels less than 30 inches, the full potential of cushioning is not realized. Thus, 30 inches of travel appears to be the optimum for this class of lading."

(Pullman-Standard had a three-year study of 3,440 cars as a measure of the value of cushioning. According to reports on condition of lading at destination, goods packed in fibre boxes and other containers accounted for one-third of all damage claim payments—while the actual movements earned only one-fifth of gross freight revenues and involved one out of every nine carloads shipped. Pullman-Standard's comment: "It would be good business to earn one-fifth of the gross revenue with one-ninth of the equipment—if it could be hauled without damage." Elimination of damage to this class of lading alone, P-S noted, "would mean a savings of over $25,000,000 a year to Class I railroads.")

The long-travel design has been applied in two forms—as a cushion rack mounted on a flat car deck (RA, June 22, p. 23), and as an underframe for an 85-ft flat car.

Santa Fe
GRAND CANYON LINE

WESTERN PACIFIC
FEATHER RIVER ROUTE

SOUTHERN PACIFIC LINES
SUNSET LINES

MAIN LINE Rio Grande THRU THE ROCKIES
ROYAL GORGE LINE

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SPOKANE PORTLAND AND SEATTLE RY
THE NORTHWEST'S OWN RAILWAY

GREAT NORTHERN RAILWAY
ROUTE OF EMPIRE BUILDER

Burlington Route
WAY OF THE ZEPHYRS

PROPERTIES OF SECTIONS

SECTIONS

ITEM	115 RE	CF&I 119
AREA: HEAD	3.91 Sq. In.	4.32 Sq. In.
WEB	3.05 Sq. In.	3.04 Sq. In.
BASE	4.29 Sq. In.	4.29 Sq. In.
TOTAL	11.25 Sq. In.	11.65 Sq. In.
Weight per yard	114.7 lbs.	118.8 lbs.
N.T./mile — single track	202.4	209.4
Moment of Inertia "I"	65.6	71.4
Section Modulus, Head	18.0	19.4
Section Modulus, Base	22.0	22.9
Ratio, "I" to Area	5.83	6.13
Ratio, Section Modulus, Head — Area	1.6	1.7
Distance, Base to N.A.	2.98"	3.124"

CF&I 119

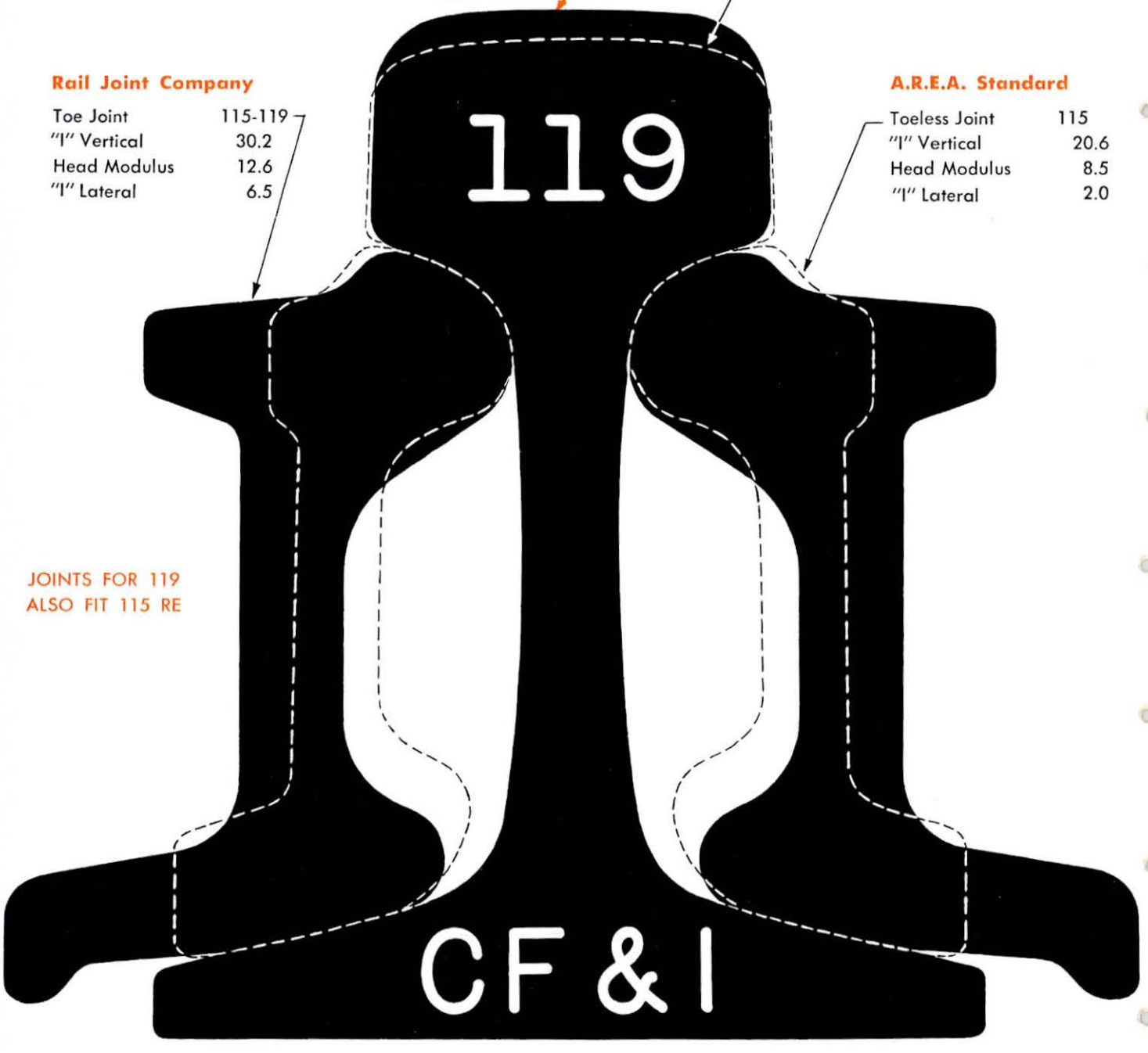
115 RE

Rail Joint Company

Toe Joint	115-119
"I" Vertical	30.2
Head Modulus	12.6
"I" Lateral	6.5

A.R.E.A. Standard

Toeless Joint	115
"I" Vertical	20.6
Head Modulus	8.5
"I" Lateral	2.0



JOINTS FOR 119
ALSO FIT 115 RE

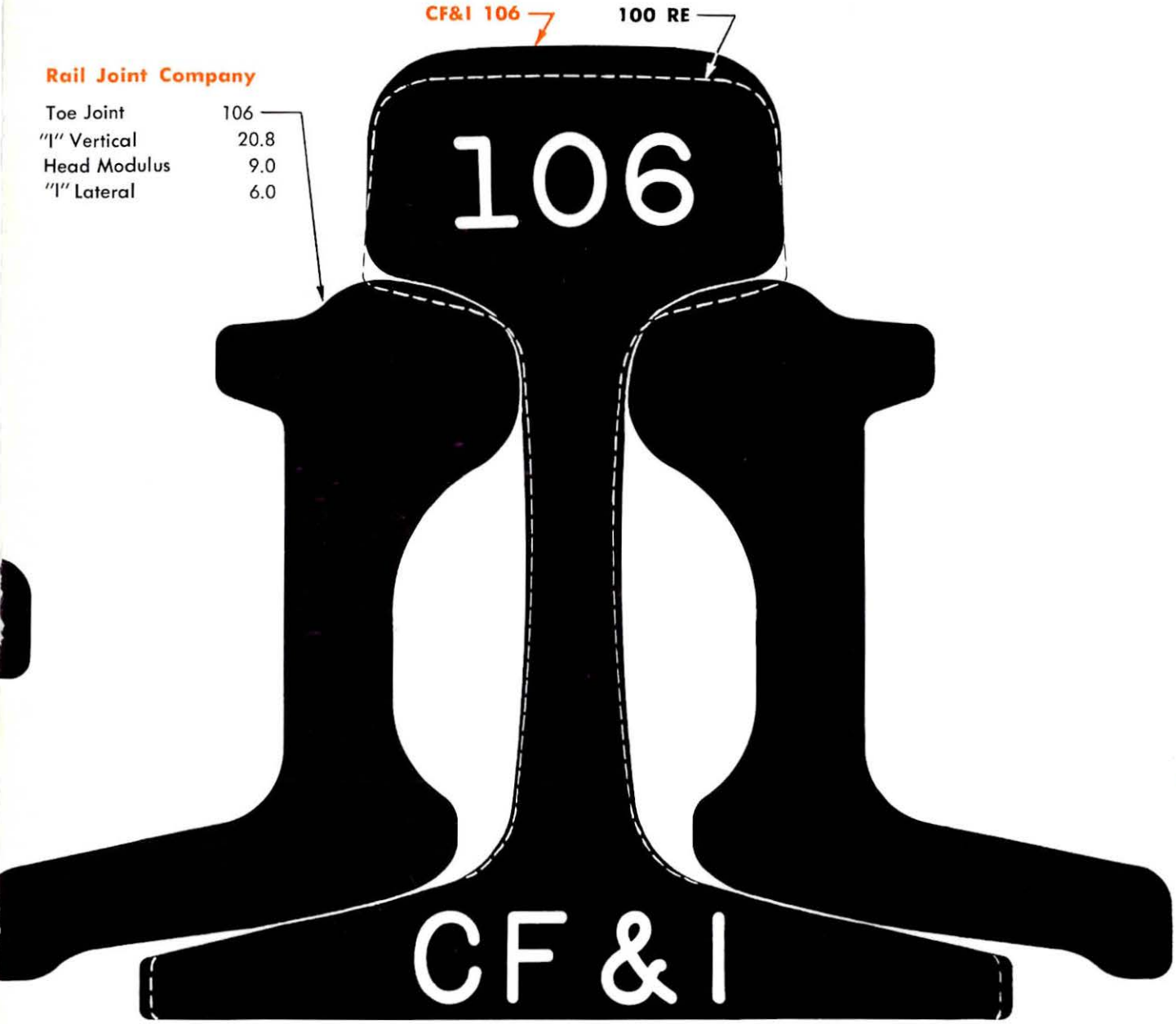
Maximum Web Stress

	psi	
119 CF&I	13,400	
115 RE	15,200	13%

ALL SECTIONS SHOWN ACTUAL SIZE

PROPERTIES OF SECTIONS

ITEM	SECTIONS 100 RE	CF&I 106
AREA: HEAD	3.80 Sq. In.	4.00 Sq. In.
WEB	2.25 Sq. In.	2.50 Sq. In.
BASE	3.90 Sq. In.	3.95 Sq. In.
TOTAL	9.95 Sq. In.	10.45 Sq. In.
Weight per yard	101.5 lbs.	106.6 lbs.
N.T./mile — single track	178.64	187.6
Moment of Inertia "I"	49.00	53.6
Section Modulus, Head	15.1	16.1
Section Modulus, Base	17.8	18.8
Ratio, "I" to Area	4.9	5.1
Ratio, Section Modulus, Head – Area	1.5	1.5
Distance, Base to N.A.	2.75"	2.85"

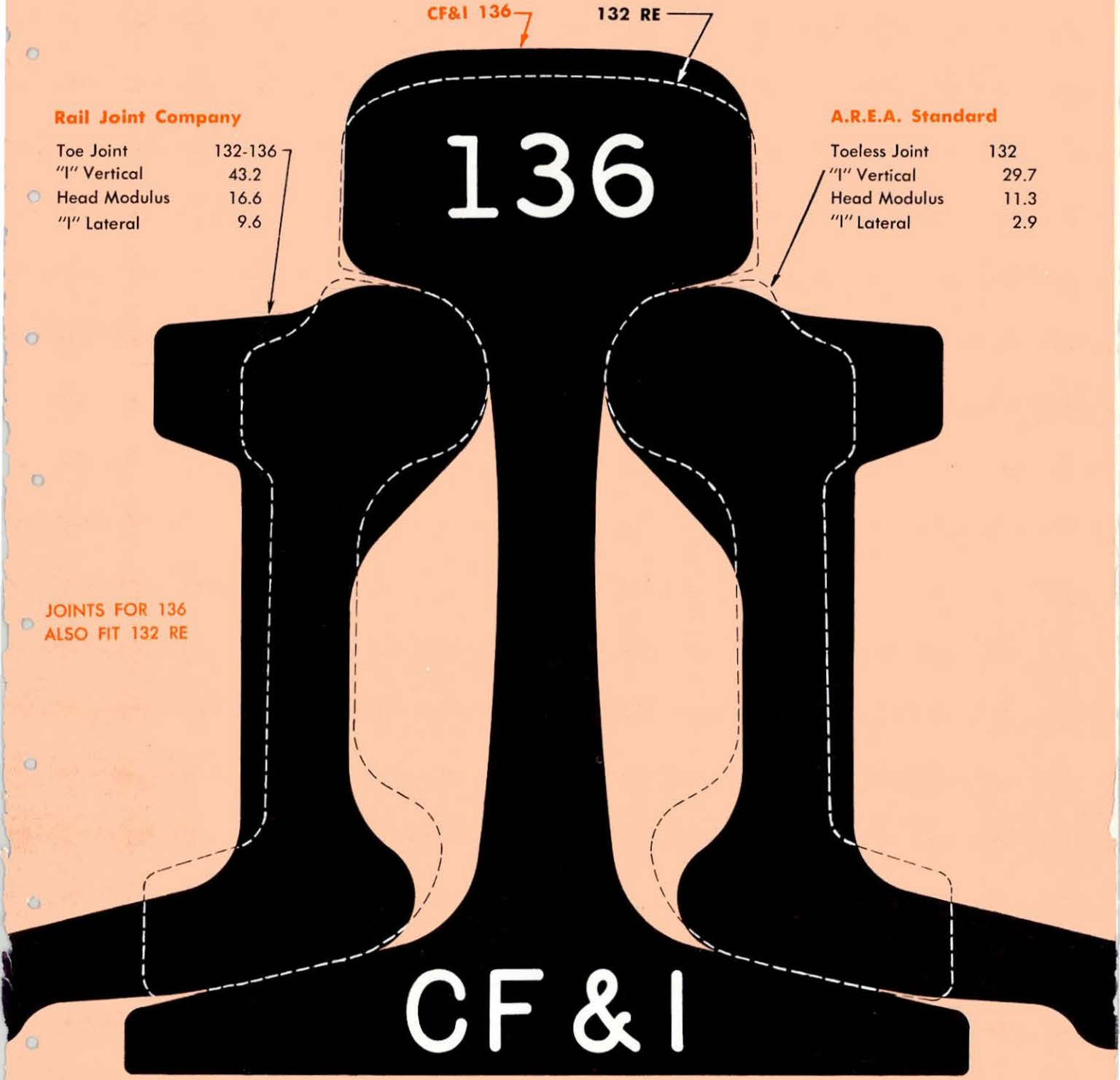


Maximum Web Stress

	psi	
106 CF&I	18,700	
100 RE	27,300	46%

PERFORMANCE

of CF&I's 136, 119 and 106
RAIL SECTIONS
justifies continuing tribute
to Western Railroad
Engineers for their
contribution toward
improved...safer...
high speed track
structures



Rail Joint Company

Toe Joint	132-136
"I" Vertical	43.2
Head Modulus	16.6
"I" Lateral	9.6

A.R.E.A. Standard

Toeless Joint	132
"I" Vertical	29.7
Head Modulus	11.3
"I" Lateral	2.9

JOINTS FOR 136
ALSO FIT 132 RE

PROPERTIES OF SECTIONS

ITEM	SECTIONS	
	132 RE	CF&I 136
AREA: HEAD	4.42 Sq. In.	4.86 Sq. In.
WEB	3.66 Sq. In.	3.62 Sq. In.
BASE	4.87 Sq. In.	4.87 Sq. In.
TOTAL	12.95 Sq. In.	13.35 Sq. In.
Weight per yard	132.1 lbs.	136.2 lbs.
N.T./mile — single track	232.3	239.4
Moment of Inertia "I"	88.2	94.9
Section Modulus, Head	22.5	23.9
Section Modulus, Base	27.5	28.3
Ratio, "I" to Area	6.8	7.1
Ratio, Section Modulus, Head — Area	1.7	1.8
Distance, Base to N.A.	3.2"	3.347"

Maximum Web Stress

	psi	
136 CF&I	10,800	
132 RE	13,300	23%

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Recognizing the desirability of developing a rail affording greater resistance to shelling and curve wear, CF&I and Western Railroads have cooperated in verifying the relative merits of High Silicon Rail versus Carbon Steel Rail.

Hi-Si® rail, with a silicon range greater than that stipulated in AREA Specifications, provides greater resistance to gage corner shelling and assures substantially reduced curve wear. Performance 50 to 100% better than Standard Carbon Rail has been confirmed by contours and field investigations of test locations and extensive additional installations on Western Railroads.

Recognition of the value of track betterment has prompted installation of CF&I's new sections and of Hi-Si® steel in areas where excessive wear is encountered. CF&I has accomplished through metallurgy what the 136, 119, and 106-pound rail sections have achieved through improved design.

CF&I STEEL

THE COLORADO FUEL AND IRON CORPORATION

DENVER, COLORADO

This insert will appear in Railway Age, July 13; Railway Track and Structures, August; and Railway Age September 14, 1959

City Likes Commuter-Aid Plan

Philadelphia's "Operation Northwest" has begun its second six-month trial as an experiment in cutting fares and increasing service to attract riders. From the city's point of view, the plan is working well. Volume is up and congestion on city streets has lessened.

Results of the first six months of operation were announced by Philadelphia's City Solicitor David Berger. Mr. Berger told the press that "some 270,000 additional passengers rode the Pennsylvania and Reading Co. lines" to Chestnut Hill during the experiment. Mr. Berger interpreted the figures as indicating that "low-fare, improved service, mass transit . . . can restore public transportation as an attractive and popular means of travel for downtown commuting."

He added that the experiment demonstrates that "public transportation can compete with automobiles . . . provided money can be found . . . to offer riders the services they want."

Statistics on travel during the first six months of the experiment were released by the Urban Traffic and Transportation Board of Philadelphia. Adjusted to allow for weather variations during the periods compared and also for a 6% annual decline in passengers that has been characteristic of all Philadelphia suburban service in the last few years, the figures show an overall gain in riders during the six months of 17.2%. This compared with a three-month gain of 14.9% (RA, March 2, p. 13). "Dramatic gains" were made on weekend trains, Mr. Berger said, adding that " 'Operation Northwest' is fulfilling its role as an experiment."

The PRR and the Reading, though, are less well pleased with the results than the city. The city's payments (RA, Oct. 27, 1958, p. 82) compensate the roads only for the cost of the additional service. The added volume has not been sufficient to compensate for reduced revenue from lower fares.

An outgrowth of "Operation Northwest" dubbed "Operation Northeast" is scheduled to begin in September.

The new reduced-fare experiment, limited to the Reading's Fox Chase service on its Newtown branch, like "Operation Northwest" has the goal of inducing travelers to use the railroad instead of their autos to get from the city's residential areas to the business district.

In this case, though, the agreement between the city and the railroad should help cut the railroad's losses on the service, which "Operation Northwest" has not done. For "Operation Northeast" the city will pay the Reading the direct cost of service between Reading Terminal and Fox Chase, plus an additional sum to compensate for the lower fares of the experiment, plus a small additional amount to cover riders who might be diverted to "Operation Northeast" from some other Reading line. In return for this payment, which will amount to $105,000, the city will take all revenues from the Reading Terminal-Fox Chase service.

U.S. Transport Policy Hit Again

One more nationally known economist has aimed his critical artillery at government's dealing with transportation.* The new barrage appears in a book by Professor Dudley F. Pegrum of the University of California (LA). Its title is "Public Regulation of Business."†

Government—so more and more economists are pointing out—is badly bungling its handling of transportation. By its huge investment of public funds in transport—undisciplined by the economic tests which control private investment—government has distorted the normal division of available capital among the various types of transportation. By its backward-looking regulatory policies, government has further played hob with the quality of transportation service.

"The enormous total investment in transport facilities and the relatively large amount of our wealth—probably about one-third of the total—that is devoted to transport require that careful attention be given to ways and means of assuring that the investment is wisely made and that over-expansion is avoided," Professor Pegrum warns. "If transport is to be cheap, the allocation of economic resources to it must be in keeping with the efficiency principle, which means that those resources are being devoted to their most valuable use.

"Cheap transport for the individual [i.e., cheap because it is partly paid for from taxation] may actually be very expensive for the country.

"It is the failure to use the measuring rods [of economics] that has led to the present transport dilemma in this country, with its railroad 'crisis,' highway 'inadequacy' and metropolitan congestion.' "

On the subject of freight rates, Professor Pegrum expresses himself unequivocally:

"What is urgently needed is better information on the minimum economic costs below which rates should not be permitted to go. The relationships of the rates above those minima should be based on market and policy considerations, not on cost.

"If a firm acts economically, it will not consider average total costs in making its [pricing] decisions." In other words, if all a product will sell for is only slightly more than its out-of-pocket cost, then the company will adopt that price—because a rate that makes a small contribution to fixed costs is better than losing even this slight contribution.

"Railroads have not been allowed to adopt pricing practices and procedures that characterize private business, or the same practices and procedures that characterize most freight transport outside railroads.

"Economical transportation means that the agency which can move the traffic at the lowest cost should be allowed to take the business. The costs which are the decisive ones in this connection are those that will be incurred if the traffic is taken and will not be incurred if it is refused."

Professor Pegrum is critical of the degree of ICC regulation of competition between railroads and other forms of transportation. He nevertheless defends continued regulation of competition between railroads. Further expression of Professor Pegrum's recommendations for limiting regulation of inter-agency competition were summarized on p. 74 of the June 22 Railway Age.

*For additional instances of this trend, see RA, May 4, p. 17; Apr. 20, p. 46; and Apr. 6, p. 19.
†Published by Richard D. Irwin, Homewood, Ill.

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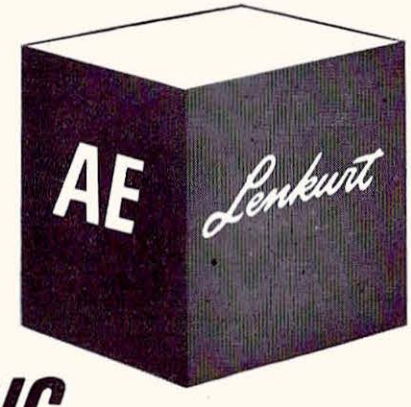

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How New Pushbutton CTC Helps

Dispatchers can now control more territory than they could with conventional CTC machines.

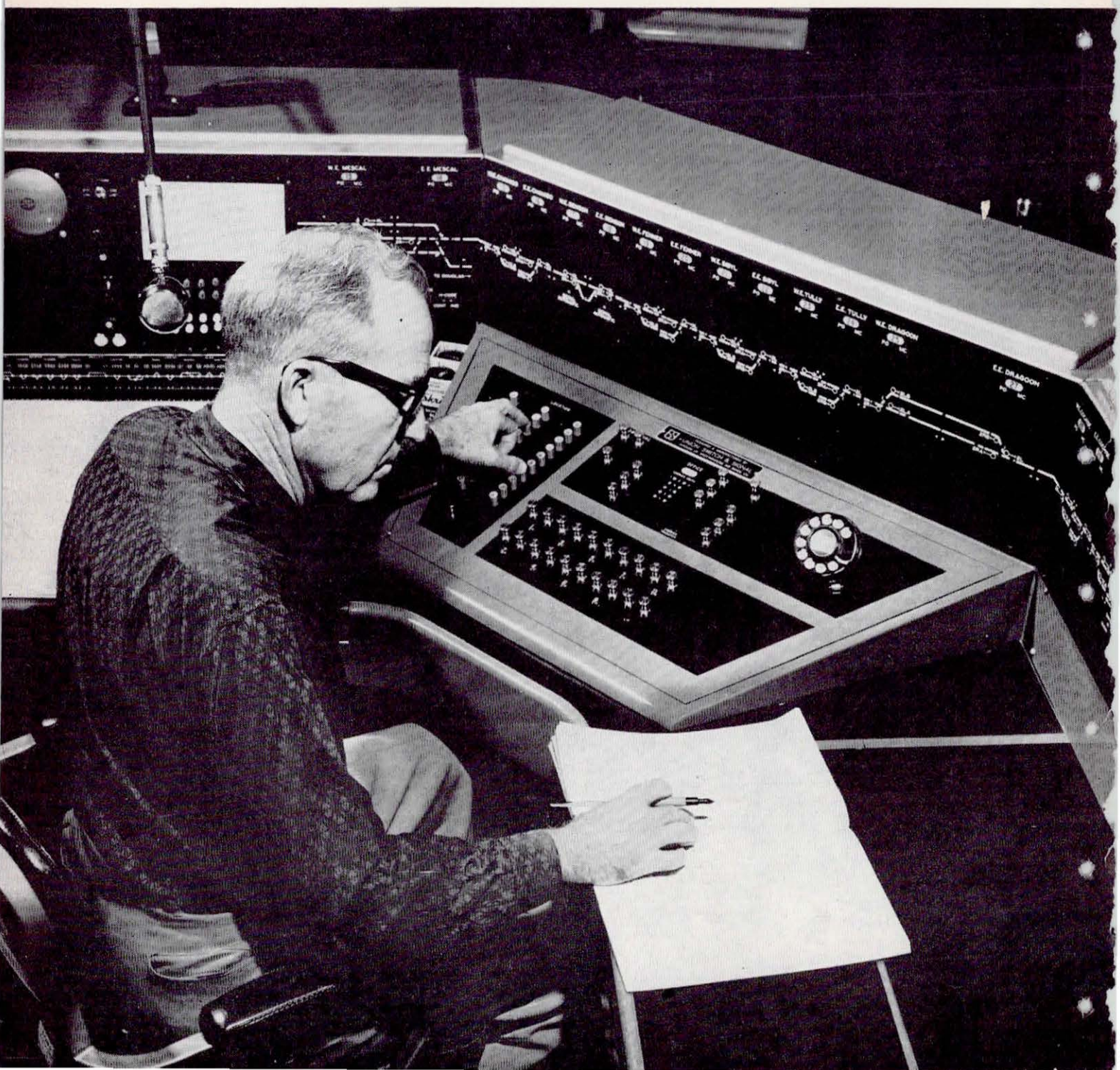
They do it with new pushbutton machines developed by Union Switch & Signal—Division of Westinghouse Air Brake Co. Six railroads have ordered eight of the new TCC (Traffic Control Center) machines.

All pushbuttons are on a central panel directly in front, and within easy reach, of the dispatcher. A miniaturized track diagram and all controls have been concentrated into the pushbuttons.

The control machine is made up of basic 3-ft modular units consisting of a track diagram section, a desk portion and the base. Units can be put together to form a "U" or an "L" shaped control machine. For extended sections of CTC territory, track diagram panels may be stacked on top of each other.

The CTC territory is divided into several "locations." A location may include only the switch and its associated signals at the end of a siding. It may include several switches or crossovers and signals in multiple.

The control console contains a location selector, several function control panels and an auxiliary control panel. The location selector, on the left side of the control console, contains two columns of ten pushbuttons, one column each for the "tens" and "units" of



Dispatchers

the location number.

A function control panel consists of two pairs of pushbuttons. One pair controls a switch or crossover normal or reverse, and one pair clears the signals right or left. The number of function control panels required (generally, six or less), is only the maximum required for any one location. The panels are 2 in. by 6 in.

The auxiliary control panel (same size as function control panel) controls such items as fleeting, maintainer's call, snow melters, carrier transfer, indication panel light, dimming, and OS bell cutout.

The track diagram panels are in 3-ft sections which may hold from five to seven passing tracks, depending upon the territory controlled. The white track diagram line is 3/32 in. wide. Miniaturized one-color spotlight-type indication lamps are set into this panel. Indications given are: track occupancy —amber; switch or lock—lunar white; clear signal—green within the signal symbol; fleeting—steady red below the signal symbol; in time—flashing red below the signal symbol. Flashing the lunar white switch position lamp or the green signal clear lamp indicates a route in storage.

Above the track diagram are names over each location as well as a number for the location. A power-off indication lamp and maintainers' call lamp are also at these location points on the track diagram panel.

Either a 40 or 57 pen graph may be installed in any 3-ft desk section to the right or to the left of the slanting control console. A communication unit takes up the space normally occupied by one of the 3-ft track diagram sections, plus the base. A Western Electric 63A selector, loudspeaker, and communications keys and jacks are provided.

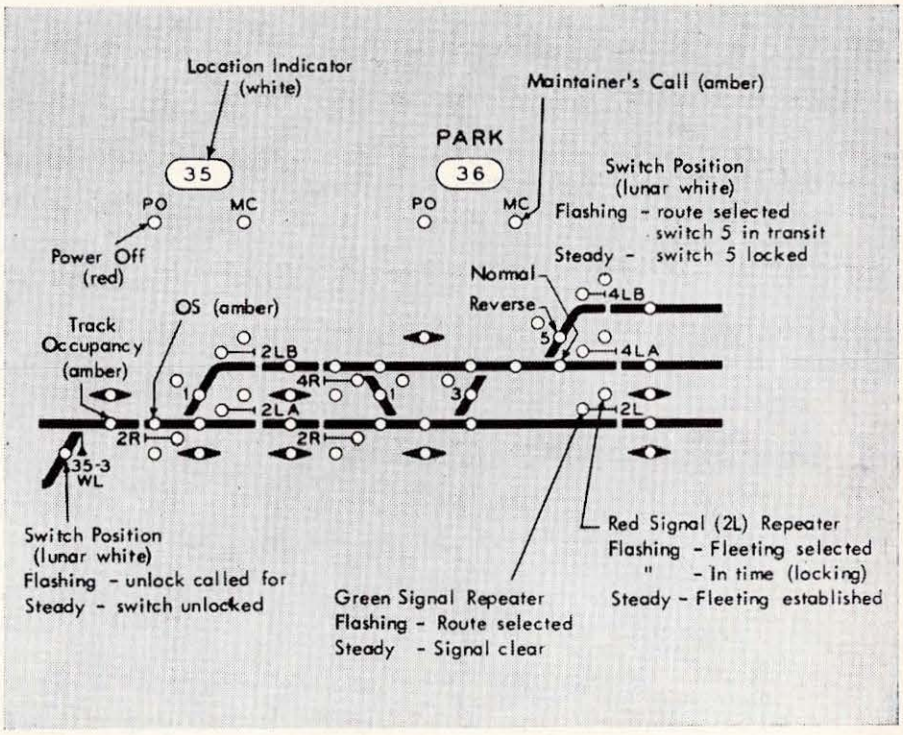
Here's how a dispatcher lines a route. When a train approaches signal 2R (see diagram of location 35) the track occupancy lamp is lighted amber. To select a route from signal 2R over switch 1 reverse, the dispatcher presses location button 3 in the tens column and button 5 in the units column. This causes the indication panel behind the No. 35 to be lighted white. He presses switch button 1R and signal button 2R. A lunar white reverse switch position lamp in the track diagram adjacent to switch 1 will flash, indicating that he has called for this switch reverse. The green signal repeater lamp in the 2R signal symbol will flash, indicating that he desires to clear this signal. At this point the controls are stored in the machine. To initiate control code to location 35, the dispatcher presses the ST button, which is below the two rows of location buttons. When the code is sent from the machine, the white location indicator lamp No. 35 will be extinguished.

This indicates to the dispatcher that his pushbuttons are disconnected from location 35 and he may immediately select another location for control. When switch 1 has reversed and is locked in the reverse position, the flashing lunar white reverse switch position lamp will burn steady, and the flashing green signal repeater lamp will also burn steady. The signal is now clear and the route is locked.

As the train passes signal 2R and occupies the OS section, a bell will sound (if the dispatcher has not pulled the bell cutout pushbutton) and an amber lamp will be lighted in the OS section. As the train passes signal 2R, the green signal repeater lamp is extinguished, indicating that the signal in the field has gone to Stop. As the train clears the approach section to signal 2R, the amber indication lamp is extinguished in that section. After the train has left the OS section and is to the right of signal 2LB, the OS amber indication lamp will be extinguished. As long as the switch is in reverse position, the lunar white reverse switch position indication lamp will burn steady. (*Continued on page 38*)

TCC INSTALLATIONS (IN SERVICE OR ON ORDER)

Railroad	Territory	Miles
CN	Hornepayne, Ont.-Nakina	132
CN	Foleyet, Ont.-Capreol	148
CP	Moose Jaw, Sask.-Swift Current	110
C&O	Hampton Roads Transfer, Va.-Grove	20
DM&IR	Missabe and Iron Range Division	104
L&N	Mobile, Ala.-Michoud, La.	127
SP	Tucson, Ariz.-Gila	128
SP	Tucson, Ariz.-Anapra, N.M.	270



TRACK DIAGRAM is miniaturized for compactness. White circles in two-headed black arrows are blocking jacks. Plugs in the jacks protect motor cars and work trains.

Machines Slash Clerical Costs

Railroad clerical practices may be costing the industry nine times more than they should, according to a two-year study by an office-machine manufacturer.

Modern electric copying machines, the study adds, can save each railroad department from $100 to $1,200 a year.

The company—Minnesota Mining & Manufacturing—surveyed 100 roads now using electric copying machines. Case histories, including time and dollar evaluations, were compiled after the machines had been in use for at least two months.

The Minnesota Mining analysis revealed cases where duplicating documents by retyping had delayed freight and other operations from an hour to as much as two days.

Copying costs, the study concludes, are about 92% higher than necessary when machines aren't used. This conclusion is based on a comparison between the Northwestern National Life Insurance Company's figures of $1.25 to $2 for the cost of retyping a document and the average cost of 10 cents when a machine is used.

Electric copying machines, Minnesota Mining says, have several additional advantages:

- Anyone can operate them without training.
- Copying errors and time (and cost) consumed in proofreading are eliminated.
- Copies are ready in as little as four seconds.
- Machines can be located wherever needed without regard for darkrooms, running water or other special facilities.
- Office personnel has time for duties more productive than routine manual copying.

ELECTRIC COPYING MACHINES—this one's a Minnesota Mining Thermo-Fax—offer railroads the opportunity to save real dollars in clerical costs. Soo Line has installed this machine at Shoreham Yard in Minneapolis.

Railroading After Hours with Jim Lynch

ED GILBERT, ECONOMIST—I don't find too many things in the paper "Labor" that arouse my enthusiasm—but I did see the other day a quotation from a speech by Ed Gilbert of the B of LF&E which made a lot of sense.

He said that the taxpayers would be saved hundreds of millions of dollars if a lot of freight and passenger traffic, now moving by highway, were diverted back to the railroads—which could handle it more economically. And the nation had better wake up, to sustain the railroads, because—in a military emergency, with fuel and labor scarce—other forms of transportation could not handle the traffic.

Paradoxically, perhaps, but nevertheless true—highway users could get a lot more available highway space for their gas tax, if part of it were spent to reduce railroad taxes and otherwise encourage diversion of traffic to the rails.

Every time you see a 100-car freight train, you are seeing highway congestion reduced to the extent of a couple of hundred trucks. Every time a well-filled commuter train goes by, you see maybe 500 autos removed from the traffic jam.

TRAINS VIA HIGHWAY—I see where, in Kansas, the Turnpike Authority is going to permit so-called "double bottom" trucking (two trailers to a tractor). They've already authorized these highway trains on the New York Thruway—and perhaps elsewhere.

What this means, of course, is just cutting the labor cost of truck transportation right in half. One of these outfits will haul, with one driver, as much freight as an industrial switching operation, with a couple of freight cars and a five-man crew. Railroads and their unions should be cooperating to get their costs down, terminal costs especially.

A friend of mine asked me how I could oppose "train limit" bills on the railroads—and object to "double bottoms" on the highways. Quite easily. Railroads are private property—highways are not. Motorists are jeopardized by operating on the same highway with a double bottom truck—not so by freight trains, which use their own "highway."

'THE AMERICAN WAY'—The Charleston, W. Va., Daily Mail has got itself into the verbal exchange between the New Haven Railroad and Time magazine (RA, June 29, p. 55).

We've all heard a lot of talk about "the American way"—which used to mean such virtues as private initiative and self-reliance.

The Daily Mail recounts all the money government is handing out to all forms of transportation except the railroads. Now, it says, "the American way"—in transportation at least—means government money for everybody, railroads alone excepted.

BRAND NEW RAILROAD?—What kind of railroads would we have if new investment capital came as easy for them as it does for highways, inland waterways and air transport installations? This question was raised the other day by an investment counselor—and it's worth some effort at imagination. In other words, what would the physical and operating characteristics of a railroad be—if it were being built brand new, like one of these modern turnpikes, and, of course, with unlimited investment capital? How much more economical would it be to operate such a railroad, than the existing average?

KEY TO SUCCESSFUL RAILROADING

Proof positive... the longer life of NATIONAL C-1 TRUCKS

Users have known for years that National C-1 Trucks provide a smooth, friction-controlled ride . . . and at the same time have longer wear life.

A recent inspection, by a group of railroad men, was performed on C-1 trucks that had been in service nearly a quarter-million miles each. This, and other inspections, showed that the friction control mechanism in National C-1 Trucks is designed for the life of the car.

Proof positive of longer life is provided by the following direct quotes from this inspection report.

AA-9082

Check friction wedge from limit of wear notch.

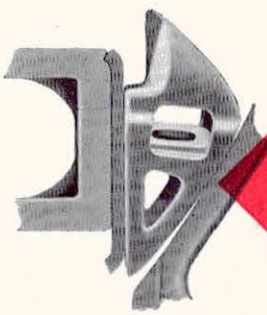
"Bright and no wear."

Check for broken wedge springs.

"None broken."

Examine convexity of friction wedge rear surface.

"Bright and very little if any wear."

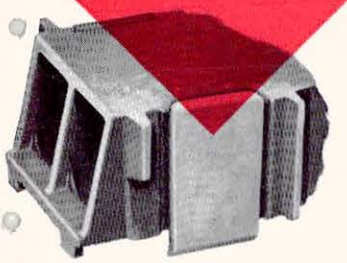


Check contact between friction wedge and side frame column wedge pocket.

"Slight polish, little wear."

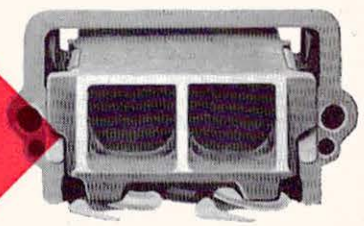
Inspect welds and check wear of bolster friction plates.

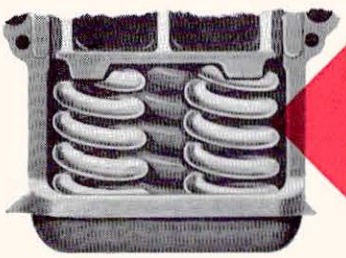
"All welds intact. Friction plates polished with little if any wear."



Inspect bolster column lugs and side frame columns for wear.

"One pad only out of 8 was found worn about 1/16 inch."





Check line of contact between coils of load springs.

"No evidence of having gone solid."

NATIONAL MALLEABLE and STEEL CASTINGS COMPANY

Established 1868

COUPLERS • YOKES • DRAFT GEARS • FREIGHT TRUCKS • JOURNAL BOXES

Transportation Products Division
Cleveland 6, Ohio
International Division Headquarters
Cleveland 6, Ohio

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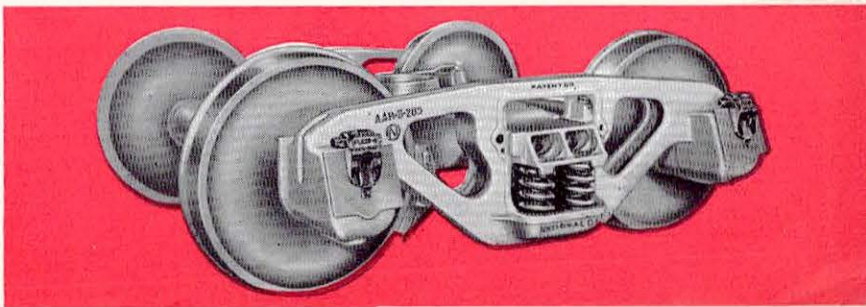


Freight Operating Statistics of Large Railroads—Selected Items

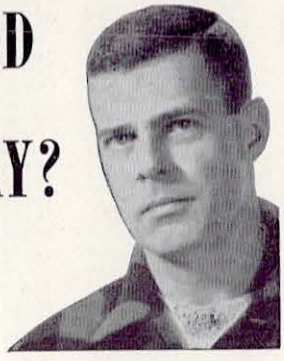
Region, Road and Year		Miles of road operated	Train miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (thousands)	Car Miles: Per cent loaded	Ton-miles (thousands): Gross excl.locos & tenders	Ton-miles (thousands): Net rev. and non-rev	Road-locos. on lines: Serviceable: Unstored	Road-locos. on lines: Serviceable: Stored	Road-locos. on lines: B.O.	Road-locos. on lines: Per cent B.O.
New Eng. Region													
Boston & Maine	1959	1,559	228,181	228,644	4,880	8,689	60.9	615,390	239,430	72	1	28	27.7
	1958	1,559	238,663	240,581	6,319	9,087	57.2	664,111	242,712	67	3	9	11.4
N. Y., N. H. & Htfd	1959	1,739	254,431	254,431	17,403	10,318	63.6	685,543	273,241	68	..	15	18.1
	1958	1,739	243,364	243,364	14,314	10,533	61.2	716,084	279,050	73	..	13	15.1
Great Lakes Region													
Delaware & Hudson	1959	764	160,273	163,093	2,849	8,086	62.6	584,335	286,315	34	..	5	12.8
	1958	764	154,907	157,607	2,944	7,976	59.1	586,089	273,105	34	..	4	10.5
Del., Lack. & Western	1959	918	238,988	244,383	13,060	9,964	64.3	688,474	287,082	57	..	5	8.1
	1958	927	243,252	251,677	14,654	10,473	60.7	723,556	281,562	58	..	4	6.5
Erie	1959	2,201	542,205	544,567	14,515	29,209	68.1	1,852,064	745,442	169	2	3	1.7
	1958	2,207	511,290	513,562	11,521	27,938	65.4	1,763,953	668,565	162	5	6	3.5
Grand Trunk Western	1959	951	227,732	230,234	2,654	7,445	59.3	547,710	221,372	41	14	20	26.7
	1958	951	214,741	216,234	1,427	7,306	58.7	520,119	198,890	43	14	24	29.6
Lehigh Valley	1959	1,116	198,934	201,323	4,287	8,739	67.3	586,206	268,758	30	..	4	11.8
	1958	1,118	200,850	203,704	4,520	8,620	60.9	609,996	264,096	31	..	3	8.8
New York Central	1959	10,395	2,126,214	2,138,381	85,327	85,695	57.9	6,723,815	2,864,392	455	..	43	8.6
	1958	10,470	2,036,010	2,049,307	83,004	80,194	54.6	6,166,726	2,600,832	431	28	27	5.6
New York, Chic. & St. L.	1959	2,155	600,548	600,548	4,673	27,087	62.6	1,970,093	855,877	104	31	5	3.6
	1958	2,155	581,095	593,886	4,758	25,479	60.0	1,842,542	760,568	143	5	9	5.7
Pitts. & Lake Erie	1959	221	59,825	59,825	....	2,403	63.0	226,409	134,442	13	..	1	7.1
	1958	221	55,540	55,540	....	1,990	59.7	184,976	111,592	17	..	1	5.6
Wabash	1959	2,379	499,993	501,868	4,932	20,500	62.6	1,415,556	557,091	114	..	..	..
	1958	2,379	465,190	465,565	3,869	19,759	59.8	1,385,171	519,588	116	..	1	.9
Central Eastern Region													
Baltimore & Ohio	1959	5,802	1,289,183	1,374,831	88,656	56,983	60.7	4,469,396	2,127,466	395	78	29	5.8
	1958	5,830	1,277,579	1,366,336	86,385	52,016	56.7	4,303,477	1,972,045	375	137	33	6.1
Bessemer & Lake Erie	1959	203	38,747	39,047	50	1,495	69.8	151,948	97,419	11	2	..	..
	1958	208	29,140	29,318	10	819	54.8	84,894	46,789	10	5	1	6.3
Central RR Co. of New Jersey	1959	597	113,266	114,766	6,109	4,255	63.4	329,489	172,865	64	..	2	3.0
	1958	600	114,817	116,489	5,974	4,187	59.5	341,415	174,613	60	..	3	4.8
Chicago & Eastern Ill.	1959	863	118,866	118,866	2,402	5,575	62.8	431,996	215,050	26	..	5	16.1
	1958	863	145,817	145,817	3,284	5,580	60.6	446,863	222,120	27	..	5	15.6
Elgin, Joliet & Eastern	1959	205	71,551	72,027	....	2,398	61.0	201,752	109,523	43	..	1	2.3
	1958	236	67,398	68,086	....	1,959	60.3	163,069	87,030	33	5	5	11.6
Pennsylvania System	1959	9,865	2,660,764	2,795,256	167,552	113,696	63.3	8,375,664	3,837,363	693	5	107	13.3
	1958	9,900	2,421,921	2,550,831	146,486	103,614	59.7	7,758,199	3,397,864	671	94	197	20.5
Reading	1959	1,302	291,096	292,642	8,798	11,198	58.4	967,789	503,820	147	4	26	14.7
	1958	1,303	307,361	309,089	7,909	11,364	55.1	1,006,712	511,838	147	12	29	15.4
Western Maryland	1959	844	153,942	160,439	9,164	6,448	60.9	573,657	326,483	41	2	2	4.4
	1958	845	145,531	150,689	8,092	5,825	59.2	521,036	291,171	45	4	3	5.8
Pocahontas Region													
Chesapeake & Ohio	1959	5,061	1,151,010	1,154,102	19,907	53,271	54.7	4,696,124	2,350,446	613	..	23	3.6
	1958	5,067	1,179,096	1,183,495	21,606	52,060	54.6	4,711,569	2,546,862	611	21	7	1.1
Norfolk & Western	1959	2,116	612,232	635,203	34,951	31,028	55.0	2,988,665	1,589,528	168	18	4	2.1
	1958	2,109	607,016	653,500	52,727	30,563	54.9	2,986,178	1,607,772	192	62	10	3.8
Rich., Fred. & Potomac	1959	110	37,268	37,268	835	2,484	62.0	171,199	68,454	15	..	..	..
	1958	110	39,282	39,282	780	2,396	57.4	169,752	63,374	10	5	..	..
Virginian	1959	608	127,519	129,319	2,819	6,464	53.9	620,305	346,032	51	12	13	17.1
	1958	608	148,933	151,393	3,873	7,773	52.7	768,380	433,786	50	13	15	19.2
Southern Region													
Atlantic Coast Line	1959	5,297	660,815	660,815	6,305	25,315	57.5	1,979,058	896,970	122	..	1	.8
	1958	5,282	666,230	666,230	6,954	23,275	54.4	1,840,867	791,369	110	18	2	1.5
Central of Georgia	1959	1,712	191,460	191,460	1,790	7,783	64.1	595,316	289,675	34	..	1	2.9
	1958	1,730	193,332	193,332	1,887	7,688	62.8	576,489	278,209	33	..	2	5.7
Florida East Coast	1959	572	125,171	125,171	....	3,927	52.3	309,255	103,114	53	..	..	..
	1958	571	125,067	125,067	....	3,928	53.4	314,405	114,187	54	..	..	..
Gulf, Mobile & Ohio	1959	2,717	265,996	265,996	....	15,195	66.0	1,081,119	514,709	82	..	9	9.9
	1958	2,717	263,000	263,000	76	14,838	64.6	1,068,271	483,102	86	..	5	5.5
Illinois Central	1959	6,439	1,030,981	1,030,981	27,952	45,339	60.2	3,368,440	1,531,012	192	31	154	40.8
	1958	6,497	995,753	995,753	27,014	41,384	58.3	3,095,303	1,361,747	216	79	72	19.6
Louisville & Nashville	1959	5,680	867,821	868,844	14,691	34,687	60.1	2,720,486	1,341,642	160	..	3	1.8
	1958	5,680	921,200	921,914	15,844	34,078	56.6	2,716,422	1,301,066	152	..	5	3.2
Seaboard Air Line	1959	4,135	614,452	614,452	1,785	25,379	59.3	1,978,173	894,647	129	..	3	2.3
	1958	4,135	626,400	626,400	1,772	23,945	56.9	1,896,068	858,735	146	..	7	4.6
Southern	1959	6,243	845,535	845,677	9,701	41,685	64.5	2,901,268	1,361,526	196	1	4	2.0
	1958	6,249	836,691	836,964	9,430	37,940	60.6	2,697,612	1,207,023	181	1	19	9.5
Northwestern Region													
Chicago & North Western	1959	9,251	829,168	829,168	11,438	31,584	68.4	2,304,643	947,520	167	..	17	9.2
	1958	9,291	805,204	805,204	10,533	28,699	59.5	2,140,464	961,417	170	5	11	5.9
Chicago Great Western	1959	1,437	133,465	133,465	185	7,186	66.4	501,082	230,574	25	..	1	3.8
	1958	1,437	135,103	135,103	190	7,352	65.3	524,552	241,790	28	..	2	6.7
Chic., Milw., St. P. & Pac.	1959	10,583	866,522	878,747	14,815	40,157	62.9	2,824,872	1,248,561	274	19	5	1.7
	1958	10,583	845,801	856,700	14,314	36,378	61.2	2,585,328	1,125,891	284	12	11	3.6
Duluth, Missabe & Iron Range	1959	557	25,818	25,868	216	401	50.7	33,485	14,828	23	25	13	21.3
	1958	559	24,612	24,619	156	303	48.3	25,137	10,326	28	67	18	15.9
Great Northern	1959	8,281	930,733	933,022	22,338	38,743	63.5	2,773,726	1,216,594	279	6	13	4.4
	1958	8,262	863,105	864,559	18,039	36,148	66.8	2,462,887	1,086,916	246	29	1	.4
Minneap., St. P. & S. St. Marie	1959	4,169	361,568	362,562	985	12,926	65.4	886,202	399,145	86	8	5	5.1
	1958	4,169	403,239	403,752	1,040	12,490	62.3	864,519	376,931	88	8	5	5.0
Northern Pacific	1959	6,533	774,487	781,496	10,692	33,390	65.5	2,254,943	983,880	216	14	14	5.7
	1958	6,533	712,358	722,595	9,533	30,129	65.0	2,044,405	889,124	193	30	10	4.3
Spokane, Portland & Seattle	1959	935	140,792	140,792	1,256	6,136	74.8	397,049	187,666	53	..	1	1.9
	1958	944	130,531	130,531	1,200	5,598	72.6	368,545	172,473	53	..	2	3.6
Central Western Region													
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1959	13,104	2,714,343	2,927,004	70,032	120,602	63.0	8,642,533	3,341,939	566	6	112	16.4
	1958	13,150	2,129,027	2,273,504	44,591	103,621	62.2	7,256,184	2,730,927	502	78	99	14.6
Chic., Burl. & Quincy	1959	8,652	1,102,731	1,100,611	35,355	46,688	65.0	3,191,238	1,386,191	132	10	72	33.6
	1958	8,724	976,990	974,944	27,723	43,182	62.4	2,954,284	1,226,177	132	35	59	26.1
Chic., Rock I. & Pac.	1959	7,542	1,071,568	1,072,286	2,559	43,431	62.9	3,106,698	1,297,765	181	..	5	2.7
	1958	7,567	912,291	913,950	2,240	36,920	58.4	2,754,015	1,099,600	177	..	9	4.8
Denver & R. G. Wn.	1959	2,128	297,358	315,639	29,072	14,611	72.9	1,011,635	495,526	78	7	7	7.6
	1958	2,155	249,948	267,519	22,782	12,825	71.7	872,918	418,869	78	7	10	10.5
Southern Pacific	1959	8,013	2,200,974	2,279,489	141,206	104,002	65.7	7,103,867	3,045,893	655	4	32	4.6
	1958	8,035	1,808,661	1,893,272	92,078	86,053	63.5	5,920,626	2,439,219	635	108	40	5.1
Union Pacific	1959	9,759	2,268,077	2,297,980	66,689	106,520	64.7	7,263,206	3,074,440	348	24	119	24.2
	1958	9,753	2,003,928	2,040,267	65,197	94,113	61.9	6,506,121	2,624,997	324	112	70	13.8
Western Pacific	1959	1,189	273,568	280,563	39,833	11,177	70.8	729,774	327,223	45	..	1	2.2
	1958	1,189	222,063	241,609	17,383	9,989	69.6	660,092	295,911	45	..	2	4.3
Southwestern Region													
Kansas City Southern	1959	886	133,530	133,730	85	8,489	67.1	629,773	297,155	25	..	1	3.8
	1958	886	135,431	135,431	49	7,950	61.6	613,630	273,645	26	..	2	7.1
Louisiana & Arkansas	1959	746	73,836	73,836	....	4,043	67.0	317,362	157,758	16	..	..	..
	1958	746	74,490	74,490	10	3,599	60.9	289,849	133,865	20	..	..	..
Mo.-Kans.-Texas Lines	1959	2,914	213,642	213,642	1,999	12,056	65.0	861,168	389,512	62	..	3	4.6
	1958	3,059	239,452	239,452	2,278	11,180	60.6	783,695	340,615	78	..	1	1.3
Missouri Pacific	1959	9,513	1,149,575	1,149,575	8,463	55,586	65.4	3,935,960	1,805,828	215	8	20	8.2
	1958	9,567	1,167,204	1,167,204	8,979	53,270	59.7	3,909,278	1,644,643	206	14	7	3.1
St. Louis-San Francisco	1959	4,536	575,493	575,493	5,866	24,553	69.0	1,681,312	768,130	102	..	7	6.4
	1958	4,558	563,780	563,780	5,243	21,850	64.8	1,495,788	672,907	95	..	12	11.2
St. Louis Southw. Lines	1959	1,554	348,617	348,617	4,343	16,565	71.7	1,036,603	463,376	51	..	1	1.9
	1958	1,554	327,179	327,211	1,615	15,161	65.4	980,938	438,493	52	..	1	1.9
Texas & New Orleans	1959	4,154	667,716	667,716	535	29,725	65.9	2,095,024	948,681	138	..	1	.7
	1958	4,271	599,042	599,042	680	27,590	61.6	1,982,777	842,434	139	..	3	2.1
Texas & Pacific	1959	1,822	294,313	294,313	2,767	13,814	63.8	1,015,387	410,272	35	..	2	5.4
	1958	1,822	295,426	295,426	2,773	13,980	56.5	1,079,391	390,832	41	..	2	4.7

For the Month of March 1959 Compared with March 1958

Region	Road	Year	Freight cars on line: Home	Freight cars on line: Foreign	Freight cars on line: Total	Per Cent B.O.	G.t.m.per train-hr. exc.locos and tenders	G.t.m.per train-mi. excl.locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Cars-miles per car-day	Net daily ton-mi. per road-me.	Train-miles per train-hour	Miles per loco. per day
New Eng. Region	Boston & Maine	1959	2,241	7,596	9,837	3.4	42,673	2,704	1,052	27.6	756	45.1	4,954	15.8	82.4
		1958	3,400	6,891	10,291	2.8	43,560	2,797	1,022	26.7	713	46.7	5,022	15.7	115.8
	N. Y., N. H. & Htfd	1959	3,043	13,463	16,506	4.9	43,480	2,694	1,074	26.5	547	32.4	5,069	16.1	122.5
		1958	4,391	12,051	16,442	3.4	46,107	2,942	1,147	26.5	538	33.2	5,176	15.7	116.4
Great Lakes Region	Delaware & Hudson	1959	5,041	5,366	10,407	9.2	65,656	3,666	1,796	35.4	890	40.2	12,089	18.0	150.5
		1958	7,252	4,690	11,942	4.3	66,959	3,802	1,771	34.2	751	37.1	11,531	17.7	150.8
	Del., Lack. & Western	1959	6,125	7,802	13,927	10.7	53,217	2,920	1,218	28.8	648	35.0	10,088	18.5	145.0
		1958	8,052	7,196	15,248	7.8	52,420	3,015	1,173	26.9	545	33.4	9,798	17.6	152.8
	Erie	1959	11,651	14,288	25,939	8.1	72,513	3,447	1,387	25.5	918	52.8	10,925	21.2	114.9
		1958	13,337	12,580	25,917	5.6	72,609	3,477	1,318	23.9	798	51.0	9,772	21.0	109.6
	Grand Trunk Western	1959	4,949	9,274	14,223	5.2	53,571	2,421	978	29.7	521	29.5	7,509	22.3	101.7
		1958	6,055	6,400	12,455	7.4	55,783	2,443	934	27.2	521	32.6	6,746	23.0	97.4
	Lehigh Valley	1959	7,077	8,326	15,403	8.3	61,331	2,973	1,363	30.8	569	27.5	7,768	20.8	215.8
		1958	6,562	8,317	14,879	10.9	63,475	3,058	1,324	30.6	578	31.0	7,620	20.9	216.7
	New York Central	1959	63,157	70,537	133,694	9.0	56,941	3,190	1,359	33.4	660	34.1	8,889	18.0	166.0
		1958	83,876	71,223	155,099	4.9	54,481	3,059	1,290	32.4	544	30.7	8,013	18.0	153.6
	New York, Chic. & St. L.	1959	9,641	14,155	23,796	13.5	60,356	3,319	1,442	31.6	1,150	58.1	12,812	18.4	156.7
		1958	13,977	9,196	23,173	9.9	60,748	3,206	1,323	29.9	1,075	60.0	11,385	19.2	137.1
	Pitts. & Lake Erie	1959	6,587	4,887	11,474	7.7	60,651	3,810	2,262	55.9	355	10.1	19,624	16.0	137.6
		1958	9,120	3,480	12,600	6.8	57,482	3,337	2,013	56.1	292	8.7	16,288	17.3	119.7
	Wabash	1959	10,017	7,896	17,913	8.3	67,772	2,843	1,119	27.2	983	57.8	7,554	23.9	151.3
		1958	10,401	9,685	20,086	6.2	65,626	2,986	1,120	26.3	830	52.8	7,045	22.0	136.6
Central Eastern Region	Baltimore & Ohio	1959	61,709	38,341	100,050	18.0	56,423	3,511	1,671	37.3	691	30.5	11,828	16.3	99.2
		1958	66,001	31,810	97,811	13.8	54,966	3,407	1,561	37.9	644	30.0	10,912	16.3	90.2
	Bessemer & Lake Erie	1959	5,733	1,361	7,094	11.1	60,779	4,136	2,652	65.2	495	10.9	15,481	15.5	114.7
		1958	9,656	304	9,960	7.8	54,524	3,079	1,697	57.1	154	4.9	7,256	18.7	70.2
	Central RR Co. of New Jersey	1959	4,072	10,117	14,189	14.7	42,796	3,068	1,610	40.6	410	15.9	9,341	14.7	84.6
		1958	4,387	8,750	13,137	12.1	43,443	3,096	1,584	41.7	446	18.0	9,388	14.6	84.6
	Chicago & Eastern Ill.	1959	3,446	3,040	6,486	14.2	65,783	3,663	1,823	38.6	1,136	46.9	8,038	18.1	134.9
		1958	3,804	2,523	6,327	13.7	62,099	3,084	1,533	39.8	1,146	47.5	8,303	20.3	158.9
	Elgin, Joliet & Eastern	1959	7,973	8,825	16,798	5.3	20,412	2,919	1,584	45.7	209	7.5	17,234	7.2	73.2
		1958	8,325	5,102	13,427	6.5	23,130	2,565	1,369	44.4	205	7.6	11,896	9.6	67.2
	Pennsylvania System	1959	133,036	72,661	205,697	20.4	56,211	3,228	1,479	33.8	606	28.4	12,548	17.9	130.3
		1958	130,544	61,167	191,711	12.2	57,069	3,283	1,438	32.8	569	29.1	11,072	17.8	98.7
	Reading	1959	19,810	15,866	35,676	23.8	50,511	3,325	1,731	45.0	459	17.4	12,483	15.2	65.9
		1958	21,931	17,232	39,163	9.9	49,822	3,275	1,665	45.0	442	17.8	12,671	15.2	65.1
	Western Maryland	1959	6,942	2,865	9,807	3.9	55,809	3,773	2,147	50.6	1,019	33.0	12,478	15.0	133.9
		1958	8,856	2,522	11,378	3.0	51,547	3,645	2,037	50.0	841	28.4	11,116	14.4	106.5
Pocahontas Region	Chesapeake & Ohio	1959	64,269	23,938	88,207	6.8	75,996	4,094	2,049	44.1	866	35.9	14,981	18.6	65.5
		1958	73,061	19,346	92,407	2.4	78,098	4,016	2,171	48.9	906	33.9	16,214	19.5	66.1
	Norfolk & Western	1959	40,933	8,039	48,972	4.1	88,166	5,017	2,668	51.2	1,027	36.5	24,232	18.1	123.9
		1958	51,751	6,726	58,477	1.1	88,629	5,043	2,715	52.6	891	30.8	24,592	18.0	92.5
	Rich., Fred. & Potomac	1959	112	955	1,067	2.2	104,901	4,597	1,838	27.6	2,127	124.6	20,074	22.8	85.8
		1958	205	991	1,196	2.0	96,946	4,327	1,615	26.4	1,886	124.2	18,585	22.4	90.1
	Virginian	1959	12,957	1,123	14,080	3.1	73,557	4,963	2,769	53.5	776	26.9	18,359	15.1	62.0
		1958	14,926	1,489	16,415	2.1	77,481	5,262	2,971	55.8	873	29.7	23,015	15.0	71.4
Southern Region	Atlantic Coast Line	1959	20,561	15,493	36,054	4.1	52,828	3,011	1,365	35.4	788	38.7	5,462	17.6	193.9
		1958	24,758	12,298	37,056	2.4	49,519	2,771	1,191	34.0	677	36.7	4,833	17.9	184.8
	Central of Georgia	1959	3,557	5,192	8,749	3.1	53,134	3,110	1,513	37.2	1,034	43.4	5,458	17.1	198.0
		1958	5,126	4,120	9,246	3.3	52,710	2,987	1,441	36.2	991	43.6	5,188	17.7	192.0
	Florida East Coast	1959	690	4,947	5,637	.6	42,845	2,480	827	26.3	607	44.2	5,815	17.3	85.2
		1958	698	3,932	4,630	.8	42,174	2,515	913	29.1	847	54.6	6,451	16.8	83.3
	Gulf, Mobile & Ohio	1959	6,498	10,211	16,709	5.5	77,773	4,066	1,936	33.9	1,004	44.9	6,111	19.1	101.9
		1958	8,429	8,183	16,612	7.4	79,272	4,063	1,837	32.6	946	44.9	5,736	19.5	100.2
	Illinois Central	1959	26,416	22,905	49,321	4.1	61,767	3,296	1,498	33.8	1,007	49.5	7,670	18.9	97.5
		1958	32,133	16,010	48,143	2.9	57,265	3,138	1,380	32.9	913	47.6	6,761	18.4	96.5
	Louisville & Nashville	1959	37,766	15,953	53,719	6.8	55,482	3,141	1,549	38.7	805	34.7	7,620	17.7	191.9
		1958	45,695	12,818	58,513	4.9	53,338	2,955	1,415	38.2	734	34.0	7,389	18.1	207.8
	Seaboard Air Line	1959	18,104	11,974	30,078	3.2	60,395	3,278	1,483	35.3	949	45.4	6,979	18.8	176.6
		1958	19,178	11,049	30,227	2.7	56,292	3,083	1,396	35.9	922	45.2	6,699	18.6	156.7
	Southern	1959	20,437	27,992	48,429	4.9	61,507	3,438	1,613	32.7	897	42.6	7,035	17.9	154.0
		1958	22,481	24,150	46,631	4.8	54,797	3,236	1,448	31.8	829	43.0	6,231	17.0	146.4
Northwestern Region	Chicago & North Western	1959	21,398	26,177	47,575	5.4	51,477	2,794	1,149	30.0	615	29.9	3,304	18.5	169.0
		1958	25,364	23,404	48,768	5.0	51,021	2,669	1,199	33.5	635	31.8	3,338	19.2	155.1
	Chicago Great Western	1959	2,264	3,542	5,806	4.1	71,686	3,761	1,731	32.1	1,268	59.6	5,176	19.1	178.2
		1958	2,833	4,340	7,173	3.2	73,549	3,887	1,792	32.9	1,149	53.5	5,428	18.9	151.3
	Chic., Milw., St. P. & Pac.	1959	30,357	23,590	53,947	4.6	65,268	3,267	1,444	31.1	713	36.4	3,806	20.0	103.9
		1958	39,405	21,045	60,450	5.1	61,177	3,065	1,335	30.9	606	32.0	3,432	20.0	98.8
	Duluth, Missabe & Iron Range	1959	13,886	708	14,594	2.2	20,785	1,363	604	37.0	33	1.7	859	16.0	16.0
		1958	14,798	379	15,177	4.5	16,882	1,070	440	34.1	23	1.4	596	16.5	8.2
	Great Northern	1959	22,738	20,038	42,776	3.4	63,539	3,000	1,316	31.4	907	45.5	4,739	21.3	112.3
		1958	26,854	17,084	43,938	3.7	62,477	2,874	1,268	30.1	819	40.8	4,244	21.9	110.4
	Minneap., St. P. & S. St. Marie	1959	6,720	5,714	12,434	9.5	48,594	2,463	1,109	30.9	970	48.0	3,088	19.8	132.0
		1958	7,827	6,344	14,171	2.8	48,484	2,155	939	30.2	837	44.5	2,917	22.6	148.9
	Northern Pacific	1959	18,913	16,420	35,333	2.6	64,857	2,915	1,272	29.5	929	48.1	4,858	22.3	110.8
		1958	20,860	13,209	34,069	3.6	62,870	2,873	1,249	29.5	847	44.1	4,390	21.9	104.0
	Spokane, Portland & Seattle	1959	1,311	3,916	5,227	2.8	44,009	2,830	1,338	30.6	1,142	49.9	6,475	15.6	95.8
		1958	1,702	3,389	5,091	3.2	43,404	2,838	1,328	30.8	1,072	47.9	5,894	15.4	87.7
Central Western Region	Atch., Top. & S. Fe (incl. G.C. & S. F. and P. & S. F.)	1959	48,932	37,152	86,084	4.6	79,062	3,195	1,235	27.7	1,273	72.9	8,227	24.8	149.1
		1958	59,767	26,210	85,977	5.7	81,408	3,416	1,286	26.4	1,039	63.4	6,699	23.9	116.8
	Chic., Burl. & Quincy	1959	22,814	23,483	46,297	3.7	64,848	2,919	1,268	29.7	954	49.4	5,168	22.4	179.3
		1958	25,853	18,833	44,686	2.9	67,557	3,031	1,258	28.4	885	50.0	4,534	22.3	150.2
	Chic., Rock I. & Pac.	1959	14,578	22,398	36,976	4.9	61,574	2,907	1,214	29.9	1,106	58.8	5,551	21.2	199.7
		1958	17,775	22,694	40,469	4.8	63,892	3,025	1,208	29.8	882	50.7	4,688	21.2	169.4
	Denver & R. G. Wn.	1959	8,364	5,896	14,260	5.6	72,167	3,411	1,671	33.9	1,136	46.0	7,512	21.2	124.7
		1958	9,136	4,924	14,060	4.9	70,579	3,503	1,681	32.7	972	41.5	6,270	20.2	104.4
	Southern Pacific	1959	32,044	42,678	74,722	2.5	69,950	3,260	1,398	29.3	1,360	70.7	12,262	21.7	122.7
		1958	35,813	31,271	67,084	1.8	70,096	3,306	1,362	28.3	1,168	64.9	9,793	21.4	88.1
	Union Pacific	1959	31,075	34,813	65,888	1.7	91,002	3,235	1,369	28.9	1,523	81.6	10,162	28.4	163.5
		1958	35,099	28,980	64,079	1.8	88,143	3,282	1,324	27.9	1,333	77.2	8,682	27.1	135.5
	Western Pacific	1959	2,680	3,486	6,166	2.4	78,084	2,679	1,201	29.3	1,766	85.3	8,878	29.3	232.6
		1958	2,881	2,797	5,678	3.0	78,536	2,988	1,340	29.6	1,721	83.5	8,028	26.4	183.8
Southwestern Region	Kansas City Southern	1959	2,461	5,185	7,646	6.2	100,828	4,750	2,241	35.0	1,244	53.0	10,819	21.4	201.0
		1958	2,934	5,062	7,996	3.9	95,775	4,550	2,029	34.4	1,098	51.8	9,963	21.1	177.7
	Louisiana & Arkansas	1959	1,997	2,989	4,986	7.6	82,496	4,316	2,145	39.0	1,016	38.9	6,822	19.2	192.1
		1958	2,670	3,373	6,043	5.4	79,064	3,902	1,802	37.2	714	31.5	5,789	20.3	163.5
	Mo.-Kans.-Texas Lines	1959	5,182	6,028	11,210	9.7	68,406	4,038	1,827	32.3	1,070	51.0	4,312	17.0	116.6
		1958	6,121	5,634	11,755	7.8	65,559	3,295	1,432	30.5	925	50.1	3,592	20.0	107.6
	Missouri Pacific	1959	23,265	22,769	46,034	8.7	71,004	3,443	1,580	32.5	1,275	60.0	6,123	20.7	166.5
		1958	26,070	20,047	46,117	6.0	71,785	3,362	1,414	30.9	1,167	63.3	5,545	21.4	173.3
	St. Louis-San Francisco	1959	12,041	9,626	21,667	2.2	61,373	2,930	1,339	31.3	1,183	54.8	5,463	21.0	192.4
		1958	14,536	8,133	22,669	1.7	57,817	2,665	1,199	30.8	913	45.7	4,762	21.8	183.4
	St. Louis Southw. Lines	1959	2,149	4,377	6,526	2.3	71,941	2,983	1,334	28.0	2,216	110.5	9,619	24.2	222.9
		1958	3,055	3,646	6,701	1.5	69,823	3,002	1,342	28.9	2,085	110.3	9,102	23.3	207.7
	Texas & New Orleans	1959	6,239	14,287	20,526	1.6	77,071	3,153	1,428	31.9	1,452	69.0	7,367	24.6	162.6
		1958	8,094	13,714	21,808	1.6	73,630	3,329	1,414	30.5	1,229	65.4	6,363	22.2	147.0
	Texas & Pacific	1959	3,102	6,115	9,217	3.2	78,975	3,464	1,400	29.7	1,428	75.3	7,264	22.9	270.3
		1958	4,137	5,532	9,669	2.6	83,895	3,669	1,328	28.0	1,294	82.0	6,920	23.0	239.7

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

THROWING GOOD WOOD AWAY?



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PUSHBUTTON CTC (*Continued from page 33*)

If the dispatcher desires to return switch 1 to normal, he again presses the location buttons 3 in the tens column and 5 in the units column. This action lights location indication 35 white. He presses switch button 1N and the lunar white normal switch position indication lamp will flash to indicate the dispatcher has called for the normal position. The steady burning lunar white reverse switch position indication lamp will be extinguished. Next he presses the code start button to send control codes to location 35 and extinguishes the white location indicator lamp behind 35. As soon as the switch has been positioned normal, the flashing-lunar white switch position indication lamp (switch 1) will be extinguished, thus the dark panel at that location indicates that the switch is normal and signal 2R is at Stop.

Assume that the dispatcher had inadvertently cleared signal 2R and that he now desires to cancel the signal. To do so, he again pushes location buttons 3 and 5 to select that location. He then pulls signal button 2R. The steady green signal repeater lamp in signal symbol 2R is extinguished, and the red signal repeater lamp at the base of this signal symbol 2R flashes. Also, the red signal repeater lamp at the base of signal symbol 2LA flashes. Although the controls are now stored in the machine, the flashing aspects indicate that the signals are in time. Pressing the ST button extinguishes the white lamps behind the number plate at 35. The red signal repeater lamps at signals 2R and 2LA continue flashing. The route remains locked until the expiration of this time locking. When the time has expired and the route is unlocked, these flashing red signal repeater lamps are extinguished. Also, the lunar white normal switch position lamp in the track diagram at switch 1 is extinguished.

To set up fleeting or non-stick control for signal 2LA at location 35, the dispatcher pushes location buttons 3 and 5. Then he presses signal button 2L, holds it down and presses the FL, or fleeting button. As he does so, the red signal repeater lamp at the base of signal symbol 2LA is lighted steady and the green signal repeater lamp in signal symbol 2LA flashes. The lunar white switch position lamp in the main track burns steady to indicate that switch 1 is normal and locked. The dispatcher then presses the code start button ST.

When signal 2LA is cleared and the route is lined and locked, the green signal repeater lamp burns steady. As the train passes signal 2LA at location 35 the OS track occupancy lamp is lighted amber, and the green signal repeater lamp in signal symbol 2LA flashes. As soon as the train passes the first intermediate signal to the left of signal 2R (at location 35) the green signal repeater lamp at 2LA again burns steady, indicating that signal 2LA has climbed from Stop to a less restrictive aspect. The red signal repeater lamp at the base of signal 2LA burns steady to indicate that this signal is on fleeting control.

To cancel the fleeting control for signal 2LA and retain the clear signal for a second train, the dispatcher pushes location buttons 3 and 5 to select that location. Holding down the signal button 2LA, he pulls the FL or fleeting button. This extinguishes the red signal repeater lamp at the base of signal symbol 2LA. He releases the 2LA signal button and the FL button. He presses the code start button and the white location light is extinguished. The second train in approach to signal 2LA will receive a clear signal. However, when it has passed signal 2LA, the green signal repeater will be extinguished.

If the dispatcher wants to protect a motor car, or a work train, he can do so by blocking. To do this, he inserts a red blocking plug in a jack covering the area between the home signals where the train or motor car is operating. For example, assume a motor car operator wants to go to a set-off location between westward home signal 2LA at location 35 and eastward home signal 2R at location 36. The dispatcher would then put a blocking plug in the jack below the track diagram between these signals. The jack is outlined by a double-headed black arrow. After inserting the plug, he cannot clear signals for routes into the territory blocked. If, for track maintenance work, a switch or crossover is to be blocked, either normal or reverse, he inserts the blocking plug in the appropriate jack after he has controlled the switch to the desired position.

Dividends Declared

AKRON, CANTON & YOUNGSTOWN.—50¢, payable July 15 to holders of record July 1.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—37½¢, quarterly, payable July 23 to holders of record July 3.

COLORADO & SOUTHERN.—4% non-cumulative 1st preferred, $2, payable July 23 to holders of record July 8.

LOUISVILLE, HENDERSON & ST. LOUIS.—5% non-cumulative preferred, $2.50, semiannual, payable Aug. 15 to holders of record Aug. 1.

NORFOLK & WESTERN.—common, 90¢, quarterly, payable Sept. 10 to holders of record Aug. 13; 4% adjustment preferred, 25¢, quarterly, payable Aug. 10 to holders of record July 16.

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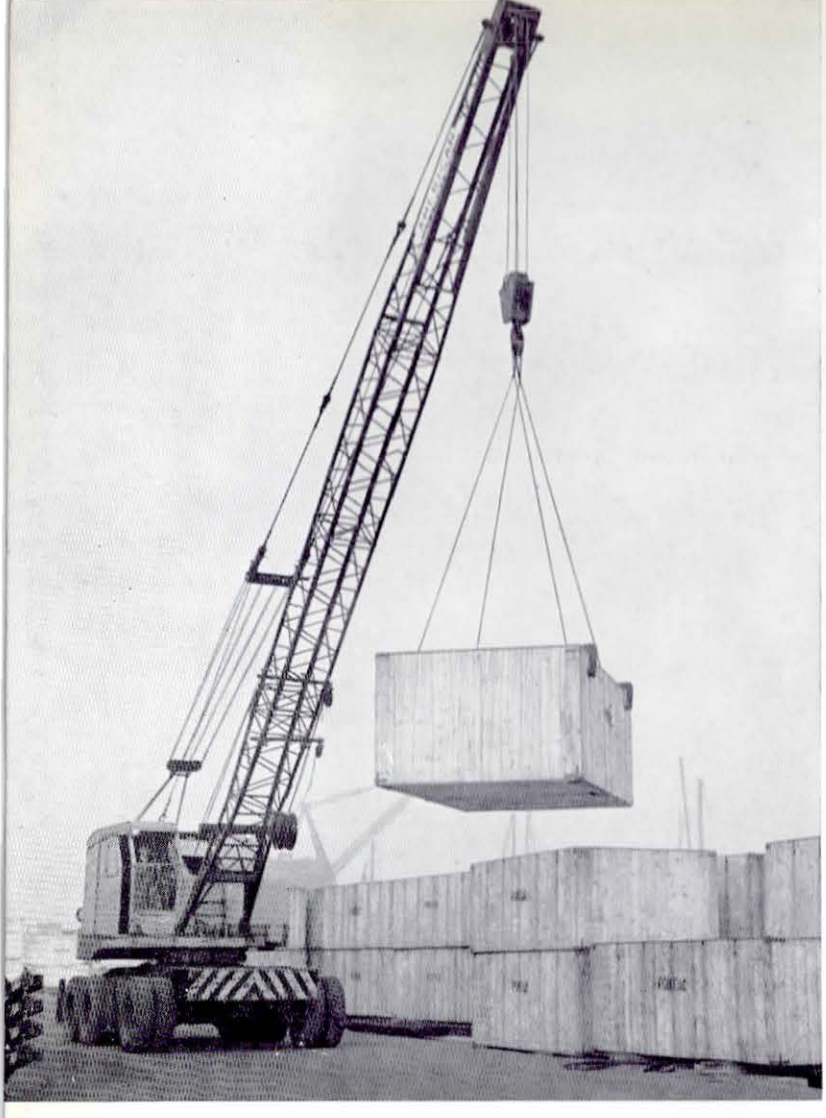
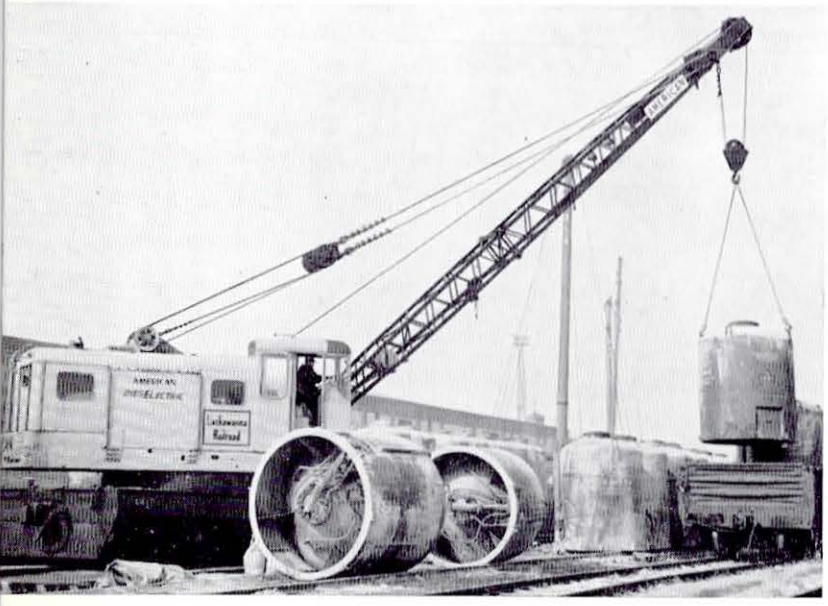
* *Official A.A.R. Capacity.* The new MARK 40 is the highest capacity *friction* draft gear ever offered for standard pockets.

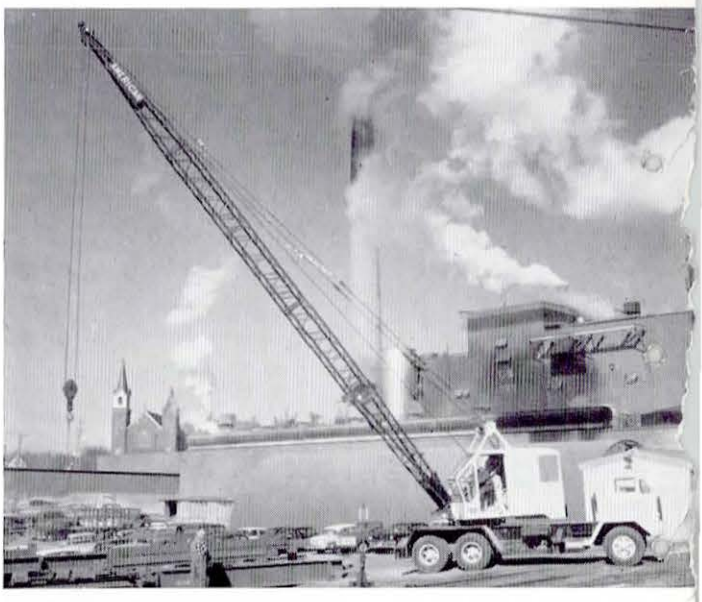


FREIGHT FLOWS FAST FROM RAIL TO BARGE WITH AMERICAN POWER AND SPEED

Export autos are transferred from gondola to barge on this Hoboken, N.J. pier. An American 30-ton Self Propelled Crane does the job fast for the Lackawanna Railroad with its combination of load handling power and unusual maneuverability. Fast cycling Self Propelled Americans move easily through crowded work areas . . . pick up, move quickly, and spot loads with pace setting speed and minimum operating cost. American Cranes offer a wide range of capacities and interchangeable fronts for construction, maintenance of way or materials handling jobs! Write for full details on the American line of on and off-track cranes, excavators and pile drivers.



22,000 POUND cement containers are unloaded by American DiesELectric* Locomotive Crane at the Hoboken pier. Trigger fast air controls boost output of this big, versatile Lackawanna Railroad unit. DiesELectric owners in every industry report, "most efficient locomotive crane available."



CONSTRUCTION, maintenance of way jobs stay on schedule with American Truck Cranes at work. This 22½-ton capacity off-track machine moves to the job fast—does its work efficiently without blocking mainline traffic!

**trademark*

EXCAVATORS-CRANES
to 2 yds.-60 tons
LOCOMOTIVE CRANES
to 130 tons
DERRICKS-HOISTS
to 800 tons
REVOLVER CRANES
to 400 tons

AMERICAN HOIST
and Derrick Company
St. Paul 7, Minnesota

AMERICAN HOIST PACIFIC COMPANY
Special materials handling equipment

CROSBY-LAUGHLIN DIVISION
Drop forged fittings for wire rope-chain

MARKET OUTLOOK *at a glance*

Carloadings Drop 17.8% Below Previous Week's

Loadings of revenue freight in the week ended July 4 totaled 573,325 cars, the Association of American Railroads announced on July 9. This was a decrease of 124,308 cars, or 17.8%, compared with the previous week; an increase of 112,980 cars, or 24.5%, compared with the corresponding week last year; and an increase of 37,991 cars, or 7.1%, compared with the equivalent 1957 week.

Loadings of revenue freight for the week ended June 27 totaled 697,633 cars; the summary, compiled by the Car Service Division, AAR follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, June 27

District	1959	1958	1957
Eastern	102,318	91,573	118,358
Allegheny	127,014	112,431	147,183
Pocahontas	56,455	52,955	57,379
Southern	113,924	105,662	114,492
Northwestern	116,565	93,362	123,042
Central Western	126,976	120,805	120,531
Southwestern	54,381	50,397	51,748
Total Western Districts	297,922	264,564	295,321
Total All Roads	697,633	627,185	732,733
Commodities:			
Grain and grain products	64,511	64,135	49,692
Livestock	3,974	3,951	4,071
Coal	113,469	122,064	126,960
Coke	9,199	5,739	9,636
Forest Products	42,379	35,473	39,802
Ore	75,865	53,990	90,583
Merchandise l.c.l.	40,839	45,141	54,968
Miscellaneous	347,397	296,692	357,021
June 27	697,633	627,185	732,733
June 20	723,738	628,010	746,764
June 13	709,139	622,686	746,122
June 6	682,624	613,381	733,477
May 30	687,726	529,779	671,045
Cumulative total, 26 weeks	16,153,512	14,304,116	17,840,396

PIGGYBACK CARLOADINGS—U. S. piggyback loadings for the week ended June 27 totaled 9,137 cars, compared with 5,897 for the corresponding 1958 week. Loadings for 1959 up to June 27 totaled 199,936 cars, compared with 124,030 for the corresponding period of 1958.

IN CANADA—Carloadings for the seven-day period ended June 21 totaled 79,233 cars, compared with 82,703 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
June 21, 1959	79,233	28,075
June 21, 1958	82,229	28,133
Cumulative Totals:		
June 21, 1959	1,709,737	682,847
June 21, 1958	1,712,693	694,642

New Equipment

FREIGHT-TRAIN CARS

► *Burlington.*—Car repair program for latter half of 1959 at Havelock (Neb.) shop will cover 500 55-ton composite hoppers, 498 70-ton steel hoppers, 35 50-ton steel gondolas, 1,000 40-ft box cars, and 177 40-ft double-door auto box cars. All repairs are scheduled to be completed by Feb. 11, 1960.

► *Chicago & North Western.*—Clinton shop repair program for 1959 (RA, Dec. 22, 1958, p. 51) contemplates repair and upgrading of 5,700 box cars, 384 70-ton ore cars, 306 Hart selective ballast cars, 728 flat cars and 282 special-device cars.

► *Santa Fe.*—Has ordered 200 refrigerator cars with mechanical temperature control at a total cost of more than $5 million. Cars will be equipped with 10-ton refrigeration units, roller bearings and load-securing devices. Dual-range refrigeration will permit hauling fresh fruits and vegetables as well as frozen foods. General American Transportation Co. will build 100 cars; Santa Fe's West Wichita shop will build 100. Delivery: fourth quarter of 1959.

► *Soo Line.*—Will acquire 75 70-ton, 2,645-cu ft capacity covered hopper cars under a lease arrangement. Deliveries will be completed by Aug. 31.

► *Southern.*—Ordered 1,240 roller-bearing, 100-ton capacity gondola and covered hopper cars, at a total cost of $25,309,000. Pullman-Standard will build 750 composite aluminum-steel gondolas. Magor will build 455 composite aluminum-steel covered hoppers, also 35 covered hoppers of alloy steel construction. (See page 9.)

► *Repair Ratio 1% Higher Than Last Year.*—Class I roads on June 1 owned 1,702,896 freight cars, 46,348 less than a year ago, according to AAR report summarized below. Repair ratio was 1% higher than on June 1, 1958.

	June 1, 1959	June 1, 1958	Change
Car Ownership	1,702,896	1,749,244	—46,348
Waiting Repairs	137,432	124,633	+12,799
Repair Ratio	8.1%	7.1%	+ 1.0%

LOCOMOTIVES

► *Western Pacific.*—Has ordered six 2,000-hp GP-20 road switching locomotives from Electro-Motive Divison of General Motors for October delivery. This is part of a $4,969,000 equipment-buying program for 1959 that also includes plans for acquiring 250 new freight cars.

New Facilities

► *Union Pacific.*—Will replace this fall a 247-ft span of its bridge across the Snake River in Idaho. Interruption of service for only a few hours is contemplated. The bridge, total length of which is 962 ft, was built in 1902. The span to be replaced is 111 ft above the stream bed. Cost, including purchase of 880 tons of steel: $500,000.

GASOLINE-LOADED SEMI-TRAILERS are leaving Maine's highways for Bangor & Aroostook rails under a new piggyback Plan III tariff. BAR uses cut-down hopper cars, ACF trailer hitches in piggyback service.

Highway Tankers Ride the Rails

The Bangor & Aroostook has scored what it thinks may be an important breakthrough in tank-trailer piggyback. Although various kinds of liquid loads have been handled successfully in the past, the BAR movement is significant in that gasoline was carried.

The BAR piggybacked four 7,000-gallon over-the-highway tankers of four oil companies between Northern Maine Junction and Presque Isle—182 miles—on July 1.

A spokesman for one major oil company in New York said the BAR's successful experiment could be "an extremely important development for the oil industry." The chemical industry is also known to be interested in the possibilities of tank-trailer piggyback.

In the BAR move, the tank trailers traveled on ex-hopper cars converted for piggyback use and equipped with the ACF trailer hitch. Impact tests were conducted prior to the movement.

Shock Problem Licked

A key factor in the movement, a BAR spokesman said, was the impact-absorbing ACF hitch. The shock absorption problem has been, in the past, a major deterrent to tank-trailer TOFC.

(The AAR's Bureau of Explosives in New York pointed out that regulations permit piggybacking of tank trailers—provided they're properly mounted. Approved devices include the ACF hitch, which the BAR is using.)

The BAR movement was carried out under a Plan III tariff (privately-owned trailers on railroad-owned flatcars). The BAR got 50 cents a mile for the round-trip movement. The road expects to carry more of the same kind of traffic in the future at an "attractive" profit.

BAR, which first offered piggyback service last December, gave a luncheon July 1 to mark the initial tank-trailer piggyback movement. Representatives of oil companies attending were briefed on the new method's possibilities.

"Today's shipment of petroleum products on piggyback flats represents the new look in Maine railroading," said BAR President W. Gordon Robertson. "It's only a preview of the useful and vital services the railroads can perform for Maine industry."

Hubert Golding, of the Dead River Oil Co., Houlton, Me., was as pleased as Mr. Robertson with the initial movement. He said the service would be particularly valuable in winter, when highway travel in Maine is often hazardous.

Interest in the BAR experiment wasn't confined to Maine. Other railroads—and shippers, particularly in the oil and chemical industries—have also shown interest in tank-trailer piggyback.

In January and August of last year, the New Haven conducted a series of tank-trailer TOFC tests at the request of the Mutrie Motor Transport Co. of Waltham, Mass. However, a spokesman for the road told Railway Age last week that the tests "were not successful in absorbing shock," and the New Haven had to decline to handle the proffered traffic.

Tank-trailer piggyback of certain bulk liquids has been carried out on a limited basis for several years. For example, the New Haven hauled small highway tankers containing Pepsi Cola syrup between New York and Boston for three years. The Lackawanna has piggybacked tankers containing liquid asphalt in New York.

Nearest thing to tank-trailer piggyback found on roads in the West, aside from studies of the subject, perhaps is a small movement on the Burlington. Under special rates, the Burlington moves a small number of tank trucks of the route-delivery type from Chicago to the Twin Cities. Oil company employees load the trucks on the flat cars, leave the key in the ignition and unload them at the other end of the run.

Traffic Men Interested

Traffic men, particularly in the chemical industry, are following tank-trailer piggyback developments with considerable interest. At a Manufacturing Chemists' Association symposium in Cleveland recently, James E. Weaver, assistant traffic manager, Columbia-Southern Chemical Corp., described progress in solving the problem of piggybacking (and fishybacking) tank motor vehicles.

The problem, he said, "will require extensive study and possibly some new ideas in construction in order to effect a marriage between tank motor vehicle construction specifications . . . and the operating characteristics of transportation by railroad or deep sea vessel. Some of the problems are shell thickness, center of gravity, surge, safety devices and return movement of empty vehicles. [But] there are no insurmountable problems in the shipment of liquid chemicals in bulk. Piggyback movement of tank motor vehicles may not be too far away, and fishyback movements will follow closely behind."

N.Y. PSC OK's Guaranteed Rate

► **The Story at a Glance: In a "history-making" decision, New York's Public Service Commission has approved a guaranteed rate on crushed stone moving between points in New York State. The DL&W, which filed the rates, is guaranteed all of the shipper's traffic in this commodity between two designated points. The shipper, Allied Chemical Co,. saves up to 25 cents a ton. The PSC says other N.Y. roads may publish similar rates.**

Although the Soo Line's guaranteed rate on pipe (RA, Dec. 15, 1958, p. 9) has generally been considered to be the test case for agreed charges in the United States, a later entry by the Lackawanna has become the first to win regulatory approval. Crushed stone rates published to take effect March 2 (RA, Feb. 2, p. 9) last week won the approval of the New York Public Service Commission, which earlier had permitted the railroad to inaugurate the service pending investigation (RA, March 9, p. 52).

The Lackawanna's tariffs cover the movement of crushed stone from Allied Chemical Co. quarries at Jamesville, N.Y. to the firm's plant at Vestal, N.Y., 81 miles away. Because the movement is entirely within the borders of New York State, the state PSC is the responsible regulatory agency.

The ICC, which has jurisdiction over the earlier guaranteed rate filed by the Soo Line, suspended that rate for seven months just before it was to take effect in April. In the meantime the Commission is holding hearings on the guaranteed rate principle under docket I&S No. 7151.

The Lackawanna believes its guaranteed rate is the first to win approval anywhere in the country. The PSC, commenting on its action, called it "a history-making concept of railroad ratemaking." Lackawanna's general traffic manager, J. L. Barngrove, Jr. commented: "The PSC, by taking this practical, modern view, has shown that it's willing to let the public get the benefit of improved transportation."

"Tremendous interest" in the guaranteed rate idea has developed among shippers since the first tariff was filed, Mr. Barngrove continued. "We will extend it anywhere else that it's practical to do so." Both the shipper and the carrier benefit from the contract rate principle.

Other railroads that are interested in similar tariffs based on "total business" were encouraged by the commission to file similar rates. The commission's formal opinion held that such tariffs are not discriminatory and are not designed to divert business from competing modes.

The Lackawanna's rates had been opposed by truckers, who had carried most of the traffic prior to the new rates. Mr. Barngrove makes an important distinction between the guaranteed rate and ordinary rate reductions that would seem to have the same initial effect, but have not worked out when tested in practice.

"Heretofore, when we reduced a rate, the truckers could reduce theirs and get the traffic back," Mr. Barngrove pointed out. "But the contract rate guarantees us the traffic once we've reduced the tariff."

The terms of the new rate, which will remain in effect for 12 months from March 2, are:

- For the first 40,000 billed tons—$1.52 per net ton.
- For the next 10,000 billed tons—$1.47 per net ton.
- For all billed tons in excess of 50,000—$1.42 per net ton.

The rates are based on a minimum movement within the 12-month period of 40,000 net tons. If the shipper does not move this quantity, the railroad is paid the normal tariff rate on all stone moved.

The first cars shipped under the new tariff were moved May 22. Up to July 8, 218 cars had been shipped on the new rate.

Other railroads than the Lackawanna and the Soo are preparing their own agreed rate proposals and are hoping that the action of the state commission will speed favorable action by the Interstate Commerce Commission.

The New York Central has been working on a guaranteed rate on rugs and carpets between Amsterdam, N.Y. and Chicago. This is expected to be filed, with what the road describes as "complete justification" of the tariff, sometime in the next week or ten days.

Fast Facsimile

The D&RGW will install a system to transmit and reproduce copies of waybills, train lists, wheel reports, etc., at seven locations on its system—general office, North Yard, and freight houses at Denver; Pueblo and Grand Junction, Colo.; Salt Lake City and Ogden, Utah.

The equipment at each location will consist of a Videograph scanning unit and a Videograph printer, manufactured by the A. B. Dick Co. The interconnecting microwave system will be furnished by Motorola, Inc. The equipment will operate on a party line basis, each unit being able to transmit to one or all of the others.

The Videograph printer is capable of reproducing 11 typewriter size sheets per minute intermittently or 15 linear ft per minute from a continuous source, both of which it will accommodate. The transmission requirements of the terminal equipment will be within the 240 kc bandwith allocated to a super-group in carrier system practice. The printer can also work from the local scanner for local copy reproduction.

As the Publisher Sees It . . .

Had lunch the other day with a couple of railroad men on the West Coast. These fellows were not by any means pessimistic about the industry, nor need they be; their railroad is among the most successful, progressive U. S. corporations. Nonetheless the word "problem" kept popping up. Enter semantics. We agreed at our luncheon that if we substituted "challenges" for "problems," one of our "problems" would be licked. For surely no one could make the old accusation "crying towel" if we talked about challenges.

And indeed, to any real executive or management man, "challenges" is just exactly what our problems are. If there were none, corporations wouldn't need anybody between the supervisor and the stockholder.

I vote henceforth we talk only about challenges; that problems assume the status of taboo attached to "wrecks" in railroad communication with the public, and on the property, too.

Robert S. Lewis

DUCTILE IRON PISTON
for ALCO 244 TYPE ENGINES

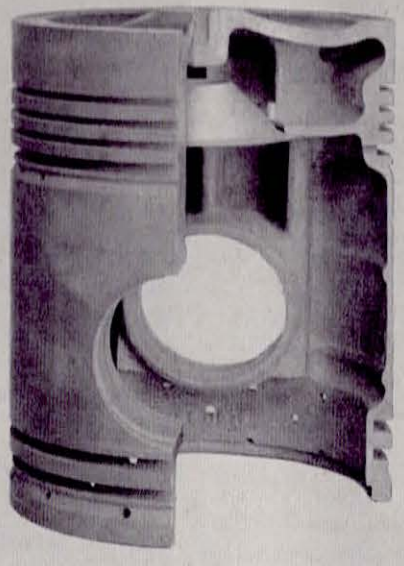
Ultimate Strength	100,000
Yield Strength	75,000
Brinell Hardness	220-240
Elongation	4%
Wear Resistance	Superior to Gray Iron

Here's another first

Combining the wear and heat resistance properties of cast iron with the high strength-to-weight ratio of aluminum, this new ductile iron piston is becoming increasingly popular in service for ALCO 244 type engines.

Ductile iron, which has a hardness of 220-240 Brinell has been found to have a distinct advantage over aluminum in providing longer service life having approximate weight of aluminum pistons. The hardness of aluminum is 110 Brinell. The difference is of great importance in such critical areas as compression ring grooves. The substitution of ductile iron for aluminum in pistons has meant a permanent 300% increase in the hardness of the ring lands. Furthermore, it has permitted the introduction of a design which allows the entire area of piston crown and compression ring to be cooled by oil. This greatly increases the operating life of the piston.

Here's another example of a superior Hunt-Spiller development showing the way to lower costs. Our representative can give further details upon request.



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People in the News

ASSOCIATION OF AMERICAN RAILROADS.—William F. Clarke, secretary to vice president in charge of the Finance, Accounting, Taxation and Valuation department, appointed secretary of the Patent division of the Law department, succeeding **E. Norwood Bessling,** who retired June 30.

BOSTON & MAINE.—Neal Holland, acting general counsel, Boston, appointed general counsel.

CANADIAN NATIONAL.—James A. McDonald, assistant vice president of research and development, Montreal, appointed general superintendent, Capreol, Ont., succeeding **W. B. Jackson,** assigned to special studies on the organizational structure of the Central region, at Toronto, Ont.

John L. Townshend, general supervisor of perishable traffic, Montreal, has retired.

CANADIAN PACIFIC.—E. Earl Marlin appointed assistant chief of transportation and **Victor G. Smart** named assistant chief of transportation (car service), Montreal.

CHESAPEAKE & OHIO.—Ronald P. Daniel appointed field editor for "Chessie News." **K. T. Reed,** general superintendent transportation, Huntington, W. Va., has assumed jurisdiction over the automobile and truck fleet (rental as well as company-owned vehicles). Abolished position of Automotive fleet manager, Richmond, Va., formerly held by **W. C. Pinschmidt,** who retired June 30.

H. Sundholm appointed general agent, Ludington, Mich., succeeding **P. E. Clough,** retired.

CHICAGO & EASTERN ILLINOIS.—Robert E. Brandt, freight sales manager, Louisville, Ky., appointed to the newly created position of foreign freight agent, Chicago.

COTTON BELT.—R. B. Burner, general agent, Waco, Tex., has retired.

DENVER & RIO GRANDE WESTERN.—George F. Dodge, director of public relations and tax commissioner, Denver, retired. **Walter S. Speckman,** tax agent, named tax commissioner.

DEPARTMENT OF COMMERCE.—John J. Allen, Jr., will continue as undersecretary of commerce for transportation. The Senate has confirmed his appointment by President Eisenhower.

FLORIDA EAST COAST.—E. H. Schoedinger, acting chief mechanical officer, St. Augustine, Fla., appointed chief mechanical officer.

FRISCO.—Delbert Fields, assistant general passenger agent, St. Louis, appointed passenger traffic manager there, succeeding **A. W. Arnett,** who retired June 30.

J. W. Dollar named terminal trainmaster, Tulsa, Okla.

GULF, COLORADO & SANTA FE.—J. W. Luke appointed mechanical superintendent, Galveston, Tex., succeeding **O. G. Pierson,** who retired June 30.

ILLINOIS CENTRAL.—Earle J. Zoll, Jr., general commerce attorney, promoted to the newly created position of assistant general solicitor. **William J. O'Brien, Jr.,** appointed general commerce attorney. **Howard D. Koontz** and **Urchie B. Ellis,** commerce attorneys, appointed general attorneys. **Robert S. Kirby,** local attorney, appointed district attorney, Northern lines. **William F. Bunn,** attorney, appointed local attorney, Cook County, Ill.

LACKAWANNA.—Robert F. Ganz appointed storekeeper, Scranton (Pa.) diesel store, succeeding the late **George F. Keirnan.**

NATIONAL MEDIATION BOARD.—Robert O. Boyd designated chairman, effective July 1, succeeding **Leverett Edwards,** who continues as a member of the board.

NEW HAVEN.—Dr. Harold Y. Allen has been appointed to head a new department of industrial medicine, New Haven, Conn.

NORFOLK & WESTERN.—Clarence R. Campbell and **John L. McCown,** assistants to treasurer, named assistant treasurers, Roanoke, Va.

SEABOARD.—Abolished position of test engineer on July 1. **R. J. Duhse,** chief chemist, assumes supervision of the test department.

SOUTHERN.—Kyle E. Epps appointed district freight agent, Atlanta, Ga. **Joseph A. Cleland** appointed freight agent, Alabama Great Southern, Tuscaloosa, Ala.

TEXAS & PACIFIC.—Kenneth R. Commander, traveling freight and passenger agent, Atlanta, Ga., appointed general agent, Washington, D.C., replacing **Allen W. Keating,** named to the newly created position of general eastern agent, New York.

OBITUARY

Clarence A. Fox, 89, retired chairman, **Central Passenger Association,** died June 26 in his home at Winnetka, Ill.

Allen R. Gould, 82, retired traffic manager, **Chicago & North Western,** died July 5 at Winter Park, Fla.

Bernard J. Hayden, 59, general agent, freight traffic department, **Lehigh Valley** at 143 Liberty Street, New York, in charge of piggyback operations, died July 6 in Roselle, N.J., after a heart attack.

Homer R. Lake, 76, who retired in Nov. 1952 as general manager of the department of highway motor transport of the **Santa Fe,** died May 28 at his home in Albuquerque, N.M.

Supply Trade

Joseph T. Ryerson & Son, Inc., Buffalo, N.Y., is now stocking and selling Reynolds aluminum, in addition to its service on steel. **Lawrence T. Beale,** head of the steel sheet and strip department, has been named manager of aluminum sales, in addition to his former responsibilities. **Donald E. Holland,** assistant to Mr. Beale, has been appointed a sales representative for the aluminum and steel sheet and strip department. **Ryerson,** Detroit, Mich., has also added Reynolds aluminum to its stocks.

Frank L. Wood has been elected vice president of operations and a director of **Inland Steel Products Co. of Milwaukee,** steel fabricating subsidiary of **Inland Steel Co.,** succeeding **Norman D. Rice,** resigned.

Neal Holland
B&M

Warren W. Caskie
Reynolds Metals

Warren W. Caskie, assistant manager, promoted to manager of transportation market sales of **Reynolds Metals Co.,** Richmond, Va.

Carl A. Danielson has been appointed general sales manager, **Cardwell Westinghouse Co.**

Ajax-Consolidated Co. has announced the appointment of **Ralph W. Kelly** to handle the Eastern Region, with headquarters at Philadelphia.

H. G. Carter, former chief engineer, **Central of Georgia,** has joined the **D. W. Hallberg Co.** as sales engineer at Savannah, Ga.

Sam R. Howard, sales engineer, **Okonite Co.,** Los Angeles, Cal., named district sales manager there. **James F. Angle,** sales engineer, Los Angeles, appointed district manager of the newly created Salt Lake City district office at 1935 South Main Street.

William L. Ferris, editor of **Selecciones del Railway Age** since its inception in March 1956, has been appointed editor of **Plant Location,** an annual publication of the Simmons-Boardman Publishing Corp., New York. Mr. Ferris succeeds **Paul Needham,** who has taken a position with the New York State Office of Transportation. **Marion Odomirok,** assistant to the editor of **Railway Age,** has succeeded Mr. Ferris as editor of Selecciones del Railway Age, a Simmons-Boardman Spanish-language quarterly.

The **Waukesha Motor Co.** of Waukesha, Wis., has announced plans for three new branches in Southern California. The company has purchased the entire inventory of Waukesha and Climax engines and parts formerly held by its distributor, Waukesha Southern California.

Robert O. Cuevas and **Donald M. Roewer** have been named sales representatives in the industrial products divisions of **Automatic Electric Sales Corp.** at New York and Detroit, respectively. Mr. Cuevas is responsible for the territory consisting of parts of New Jersey and New York and Mr. Roewer's territory includes parts of Indiana, Ohio, Pennsylvania and the lower peninsula of Michigan.

Wilbur E. Lunger has been elected staff vice president of manufacturing, and **H. Ben Young** has been elected staff vice president of engineering and research of **ACF Industries, Inc.**

Ben P. Fortin, representative of **Oakite Products, Inc.,** in Tyler, Tex., has been transferred to Los Angeles, where he will serve the metal industries. **Henry L. Jones** replaces Mr. Fortin in Tyler. **J. G. Hickey,** representative in San Francisco, has been transferred to Sacramento, Cal. **Wayland E. White** has been appointed to the Corpus Christi territory.

You Ought To Know...

Illinois Central commuters won't have to stand in line for their tickets if they use credit or prepayment plans the road will put into effect Aug. 1. For regular users of weekly and monthly commutation tickets, re-ordering each month won't be necessary. The tickets will be mailed automatically.

Elimination of firemen on diesel locomotives is opposed by Iowa Gov. Herschel C. Loveless. "It would be a serious mistake to take action in the name of economy and efficiency which would endanger the outstanding safety record of railway transportation," he told a BLF&E representative in a letter authorized for circulation.

A second "Union Dome" car shop is under construction at Wood River, Ill. by Union Tank Car Co. The 10-story high dome, similar in design to Union Tank's shop at Baton Rouge, La., will handle all the company's service operations at Wood River.

L&N President William H. Kendall is far from ready to say that his road has realized the $3,000,000 annual saving it saw in merger with the NC&StL. But significant short-range economies are plain to see. Example: elimination of duplication has reduced freight-train miles by 22,000 per month. In out-of-pocket costs, this means a monthly saving of some $59,000.

Texas coal from the 127-million-ton reserve of the Texas Pacific Coal and Oil Company, last mined in 1926, may be mined again at some future date. J. W. Yarbro, vice president of the Texas oil company, has said that technological advances make such an event "not at all improbable."

More C&NW income can be used, for property improvements, working capital, possible dividends and other purposes now that holders of its first and second mortgage bonds have agreed to modify sinking-fund provisions of the two mortgage indentures. The road reports that 85% of its first mortgage bondholders and 77% of its second mortgage bondholders have approved the amendments. Fixed annual sinking funds are unaffected, but payments into other variable funds are greatly reduced.

"Big board" listing for North American Car Corp. is "NOA." The railway supply firm was listed on the New York Stock Exchange for the first time June 30. Its stock will continue to be traded on the Midwest Stock Exchange, as it has been since 1926.

A study and report on the natural resources of Alaska and northwestern Canada in relation to transportation needs will be conducted by the Battelle Memorial Institute of Columbus, Ohio. The study, according to U. S. Sen. Warren G. Magnuson, "will determine the location, extent, and availability of known and undeveloped resources which need additional or improved transport facilities for their commercial development."

Changes in the 1958 Transportation Act were opposed by railroad spokesmen appearing before the Senate Surface Transportation Subcommittee last week. Hearings were held on amendments, proposed by Senators Case and Williams of New Jersey, that would take away many of the powers over passenger service discontinuances granted to the ICC by last year's act. First speakers were President A. E. Perlman of the New York Central and William M. Moloney, general solicitor of the AAR. Other railroaders from all sections of the country were scheduled to testify.

The 37th annual convention of the BLF&E opens this week in St. Paul. A constitutional review, national contract goals, officer elections, etc., probably will keep the sessions going until July 31.

Edwin A. Locke, Jr., president of Union Tank Car Company, served as advisor to the U. S. delegation to the recently-concluded Special Meeting on Organization and Techniques of Foreign Trade of the United Nations Economic Commission for Europe. The conference was held in Geneva, Switzerland, June 29-July 3.

October 12-14 are the dates for this year's Convention and Logistics Forum of the National Defense Transportation Association, to be held at the Olympic Hotel, Seattle, Wash. Theme: "The Revolution in Transportation." The problems of all forms of transportation, pertaining to national defense, will be discussed.

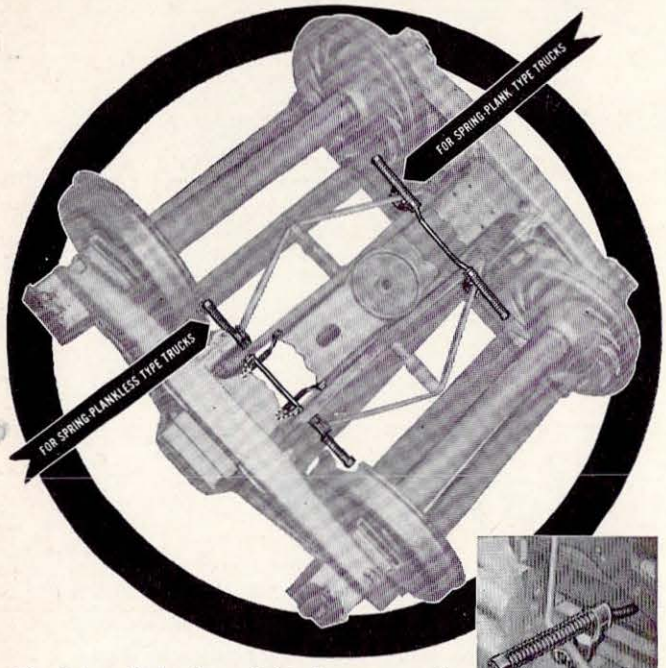
Legislation which would permit railroads to operate barge lines and pipelines was killed off in the waning moments of the Illinois legislature's 1959 session. The bill cleared the Senate, then fell 10 votes short of passage in the House. The measure itself was merely permissive. Railroads would not have been freed from the need to obtain the usual certificate of public convenience and necessity.

Summer travel volume has "deconsolidated" the "Cities of Denver and Portland" three days a week until Labor Day. A second section of the combined streamliners now makes three round trips a week between Chicago and Denver with coaches, a dome lounge, a diner, club lounge, and two sleepers. The regular train carries the Portland business.

Government control and regulation is the prospect for all common carriers of freight on the highways of Nova Scotia. The truckers are affected by the Motor Carrier Act, Chapter 7 of the Statutes of Nova Scotia 1958 as amended by Chapter 52 of 1959. The change comes into force for the truckers on Sept. 1, 1959.

Quote of the Week: New York Times reporter Robert E. Bedingfield, describing the railroad situation at mid-year: "The rich get richer and the poor get commuters."

THE IMPROVED GRIPCO BRAKE BEAM SAFETY SUPPORT



SPRING-PLANK TYPE

The Gripco Brake Beam Safety Support provides the greatest safety at lowest cost. Its dependability has been proven over years of actual service. Gripco Safety Supports are low in original cost, low in application cost and low in maintenance cost, even after years of service.

SPRING-PLANKLESS TYPE
(Safety Loops Included)

ENGINEERING IMPROVEMENTS

1. One design fits both 5'-6" and 5'-8" wheel base trucks.
2. One rod length and one spring length. One interchangeable casting fits both spring plank and spring plankless trucks.
3. Ideal for interchange repairs. New design permits easy and fast applications under all conditions. Nuts need not be removed to apply or remove the support.

OUTSTANDING FEATURES

1. An inexpensive trouble-free support for Rebuilt Car Programs.
2. Designed for spring plank and spring plankless trucks. Spring plankless trucks require safety loops which can be bolted, riveted or welded to the bolster.
3. Supports the brake beam in the event of brake beam or hanger failure.
4. Holds brake beam in horizontal position.
5. Holds brake shoe in proper position in relation to the periphery of the wheel.
6. The brake release feature pulls brake shoes away from wheel contact instantly when brakes are released.
7. Prevents unnecessary wheel and shoe wear caused by dragging brake shoes.
8. GRIPCO supports can be removed and reapplied without removing nuts; therefore nuts are furnished in proper position.
9. Brake beams, rods, and levers are held in position under spring tension thus reducing false movements, chattering and wear of hangers, hanger pins and brake heads.
10. Can replace as a billable repair any support except A.A.R. recommended practice (angle-riveted and welded).

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Position: Responsible for motivation, training, and supervision of small sales force, plus 50% of time on personal sales. Capable of assuming enlarged responsibilities within two years, and capable of long-range growth.

Requirements: Must be experienced in personal selling and in directing sales work. Mechanical training or aptitude. Railroad equipment experience desirable but not essential.

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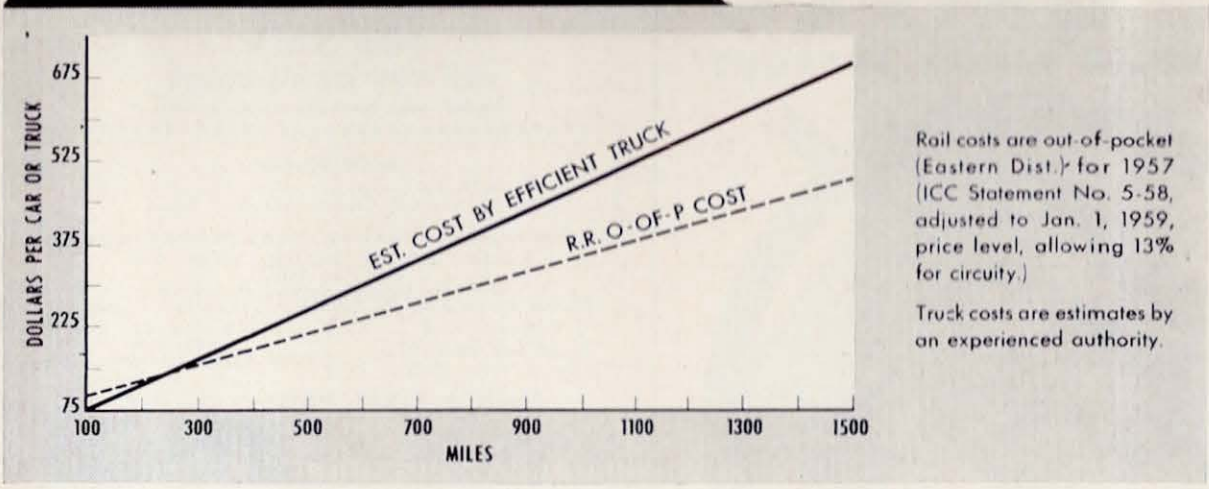
COST OF MOVING 40,000 LB BY RAIL OR TRUCK



Rail costs are out-of-pocket (Eastern Dist.) for 1957 (ICC Statement No. 5-58, adjusted to Jan. 1, 1959, price level, allowing 13% for circuity.)

Truck costs are estimates by an experienced authority.

Danger--and a Sure Way Out

The two lines in the accompanying chart are only "guesstimates"—but they are probably close enough to the facts to call for a lot of hard thinking.

The solid line shows an experienced truck operator's estimate of the lowest likely cost of moving a 40,000-lb load by an efficient truck-trailer, for various distances up to 1,500 miles. The broken line gives estimated "out-of-pocket" costs of moving the same load in a railroad box car (computed to bring approximately up-to-date the calculations of the ICC cost-finders for earlier years). The estimates shown are for the Eastern district—which ICC statisticians calculate to be higher than those in the South and West.

If the figures reflected in the chart were acceptable at face value, they would indicate that railroad out-of-pocket costs of moving a 40,000-lb load are higher than estimated truck costs up to about 250 miles. It is important, however, to consider whether ICC costing methods do not substantially overstate railroad out-of-pocket costs, particularly in periods of low traffic. True out-of-pocket costs would not fluctuate with traffic volume—because such costs, by definition, are those which are incurred if traffic moves and are avoided if it does not move.

But the trend of ICC cost estimates is important whether accurate or not, because of the frequent use of these averages as a "floor" for competitive rates. It is of vital importance, both to railroads and to fair-minded regulators, that out-of-pocket costs be accurately stated, removing entirely from them any suspicion that they include elements of constant expense.

But even if railroad cost estimates, as shown here, are appreciably over-stated, they would still be uncomfortably high for lighter loads and shorter hauls. The primary reason they are high is the excessive increase that has occurred in labor costs and especially in terminal expenses (see RA, June 1, p. 38). It is a serious competitive handicap to railroads if their costs are allowed to rise so near to truck costs for modest-sized loads and moderate distances.

The chart conveys, by implication, the highly encouraging suggestion that—whatever difficulty railroads may have in competing cost-wise with trucks for moderate-sized loads—*they have no trouble at all in going away under truck costs with heavier loads,* say 80,000 lb or 100,000 lb.

Take a 200-mile haul. With 40,000 lb the truck cost is shown in the chart at $120 and the rail cost at $125—perilously close together, even if the rail cost were considerably reduced for greater accuracy. But for 80,000 lb the truck cost would be $240 and the rail cost only $142. For 100,000 lb—truck cost $300, rail cost $150.

WHERE TO GO FROM HERE: (1) Work intensively at cost finding, to provide that out-of-pocket costs, as stated, are truly such—not including any fixed expense. (2) Take all necessary steps to reduce actual railroad costs, especially in critical competitive areas. (3) Strive in every possible way to induce heavier loading of cars—up to cubic or tonnage capacity. If these three steps are pursued vigorously, important traffic now subject to competitive erosion can be restored to safety.

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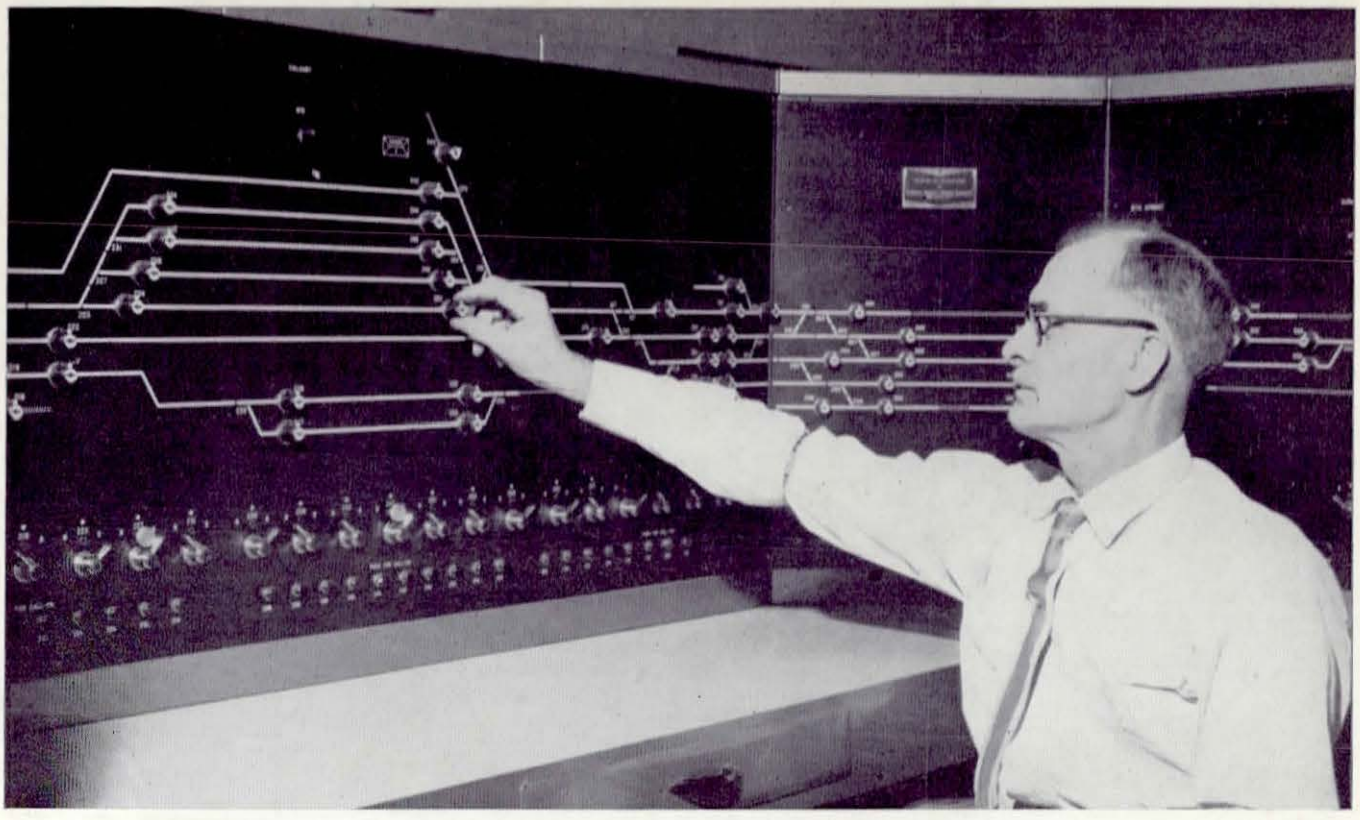

Canadian Pacific Consolidates Control at Calgary Cuts Expense with GRS Relay Interlocking

The Canadian Pacific has recently consolidated control of switching facilities around the passenger terminal at Calgary, Alberta.

Formerly, it took two mechanical interlockings, an electric interlocking, and numerous hand-throw switches to handle the 150 daily movements in this busy area. Now, a single GRS all-relay interlocking system takes care of the entire terminal district.

One operator now controls 60 switch machines and 66 signals. Coordination is better than could possibly be achieved with the old, scattered facilities. There is less delay. Most important, expenses have been cut to one-operator, one-tower levels.

Distance is no obstacle. GRS coded remote control handles distant switches and signals in the two-mile terminal district. This requires only a pair of line wires between the tower and the controlled locations—no need for heavy investment in long, multi-wire lines or cables.

Whether *your* problem is a major terminal area like Calgary, or just a few scattered switches and signals, consolidation of control with GRS all-relay interlocking will pay for itself—*fast.*

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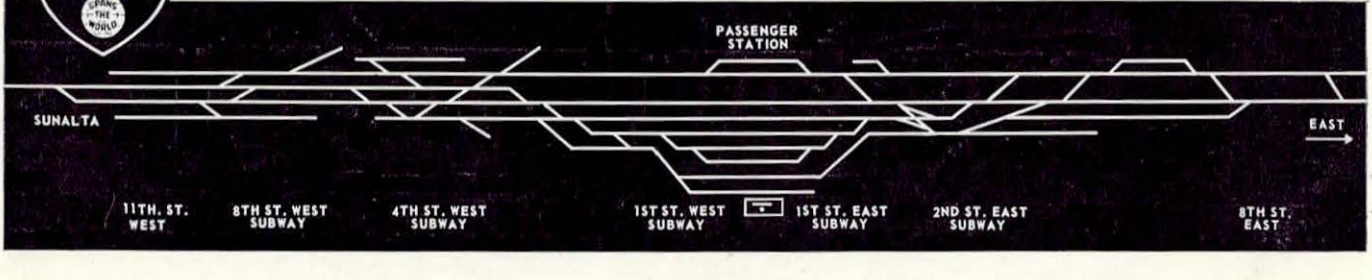
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